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NATIONAL CENTER FOR EDUCATION STATISTICS

Volume 2

Postsecondary Education

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Highlights

The proportion of young adults (25 to 34 years old) with some college education rose more than 50 percent during the 1970s but then remained level in the 1980s. In 1988, nearly 5 out of 20 young adults had completed 4 or more years of college, while more than 7 of 20 had completed at least 2 years and about 9 of 20 had completed at least 1 year (*Indicator 2:1*).

Despite increases in the total number of bachelor's degrees conferred annually between 1971 and 1986, the number and proportion conferred in the humanities, social and behavioral sciences, natural sciences, and education fell. The field of education experienced the sharpest decline. During the same period, the number and proportion conferred in the computer sciences, business and management, engineering, and other technical/ professional fields rose substantially (*Indicator 2:3*).

The proportion of degrees earned by women increased at all levels between 1971 and 1986. By 1986, women were earning more than one-half of the associate degrees, about one-half of the bachelor's and master's degrees, and about one-third of the doctor's and first-professional degrees (*Indicator 2:7*).

Women earned an increasing share of the bachelor's and master's degrees awarded in business and management between 1971 and 1986. They also made important inroads in other fields, including the life, physical, and computer sciences. Despite substantial gains in these fields, women have not reached parity with men in many scientific and technological areas (*Indicator 2:8*).

The proportion of new doctorate recipients with definite employment commitments in the United States who had jobs in colleges and universities declined between 1971 and 1981. After 1981, the proportion with such jobs remained generally stable. The size and pattern of the changes varied by field of study (*Indicator 2:15*).

Between 1970 and 1983, enrollment in colleges and universities rose by 45 percent, from 8.6 million to 12.5 million. Since 1983, enrollments at all types of institutions have been relatively steady, but in 1987 and 1988 they were up slightly from 1985 levels (*Indicator 2:16*).

THE CONDITION OF EDUCATION
1989

Volume 2

Postsecondary Education

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National Center for Education Statistics

"The purpose of the Center shall be to collect, and analyze, and disseminate statistics and other data related to education in the United States and in other nations."—Section 406(b) of the General Education Provisions Act, as amended (20 U.S.C. 1221e–1).

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Commissioner's Statement

The National Center for Education Statistics (NCES) gathers and publishes information on the status and progress of education in the United States. The Federal authorization (enacted in 1974 but with antecedents to 1867) for these activities states that the Center will "collect, collate, and from time to time, report full and complete statistics on the condition of education in the United States" (section 406 (b) (1) of the General Education Provisions Act). This legislation mandated an annual statistical report from the Secretary of Education on the subject. In 1988, the Hawkins-Stafford Elementary/Secondary School Improvement Amendments (Public Law 100-297, amending section 406 (d)(1)(C) of the General Education Provisions Act) changed that reporting responsibility to be that of the Commissioner of Education Statistics.

This year, as in 1988, the "indicators"—key data that measure the health of education, monitor important developments, and show trends in major aspects of education—are published in three volumes. *The Condition of Education* report encompasses the first two volumes, the first addressing elementary and secondary education and the second, postsecondary education. The third volume, *1989 Education Indicators*, includes the text, tables, and graphs from the first two volumes, plus the technical supporting data, supplemental information, and data sources.

NCES began presenting statistical information as education indicators with the 1986 edition of *The Condition of Education*. Since then, the indicators have been developed through studies carried out by the Center as well as from surveys conducted elsewhere, both within and outside the Federal Government. Although indicators may be simple statistics, more often they are analyses—examining relationships; showing changes over time; comparing or contrasting subpopulations, regions, or States; or studying characteristics of students from different backgrounds. Data used for these indicators are the most valid and representative education statistics available in America today for the subjects and issues with which they deal.

Not all possible indicators are published in a given edition. No more than a total of 40-50 indicators is presented in each year's report. By contrast, the Center's other major annual compendium, the *Digest of Education Statistics*, includes more than 300 statistical tables, plus figures and appendices. The indicators, therefore, represent a consensus of professional judgment on the most significant national measures of the condition and progress of education at this time, but tempered, necessarily, by the availability of current and valid information. The indicators reflect a basic core that can be repeated with updated information every year and supplemented by a more limited set of indicators based on infrequent or one-time studies.

Those indicators in the elementary and secondary education volume derive more from comprehensive data collected over time, while those in the postsecondary volume are based on more recently developed data, reflecting a narrower array of topics described by currently available timetrends and nationally representative statistics.

For elementary and secondary education, new indicators include:

- a science indicator from the most recently completed analysis of the National Assessment of Educational Progress;
- indicators on international comparisons of mathematics and science proficiency;
- an indicator on the racial and ethnic composition of elementary/secondary education, based on data from the Office for Civil Rights; and
- an indicator on the number of credits required by States for graduation from high school from new data of the Council of Chief State School Officers.

The expanded set of postsecondary indicators presented in 1988 is continued this year with selected additions. Indicators have been added on degrees awarded by colleges and universities according to the fields of study and gender of students. The National Science Foundation has provided new data on research and development spending by universities and trends in new doctorate recipients' entering university employment.

The concept of education indicators has gained the attention of the U.S. Congress, national organizations, States, and localities. To assist the Center in conceptualizing and developing a set of education indicators most useful to policymakers and researchers, Congress recently mandated that NCES convene a special study panel of experts to "make recommendations concerning the determination of education indicators for study and report" (P.L. 100-297). The Commissioner is to submit the report of the panel to Congress upon completion of its work. NCES expects to revise *The Condition of Education* to reflect those recommendations. The panel will meet over the coming year. Its conclusions, however, will not greatly influence the 1990 edition of *The Condition of Education*, but its work could result in major changes beginning in 1991.

In developing indicators, the Center has participated in a widening national discussion about the types of measures that are useful in monitoring the progress of education. A number of local education agencies and States, such as California and Connecticut, are monitoring their reform agendas through education indicators. At the national level, the Council of Chief State School Officers seeks to have consistent reporting by the States on a number of indicators that it has identified.

In future editions, the utility of this report should increase as more diverse, high quality data become available, especially as new time series can be constructed. Elementary and secondary education data will be enhanced by revisions in the basic data collected about public schools in the Common Core of Data survey and by the results from the Schools and Staffing Survey (SASS), which covers both public and private schools. Some data from the first SASS are expected to be analyzed in time for the 1990 edition.

Data collection from more postsecondary institutions than the traditional, accredited 2- and 4-year colleges and universities has already begun. This expanded system, called the Integrated Postsecondary Education Data System (IPEDS), also includes information from nonaccredited institutions whether they are public or private, 4-year, 2-year, or less-than-2-year. Information from this broader group of institutions will provide a much clearer picture of what is happening in the full scope of postsecondary education.

Finally, the format of *The Condition of Education* is designed to present statistical information in an accessible manner for a general audience. As in the 1988 edition, the one-page narrative style is followed by an illustrative chart. The tables supporting each narrative and chart are placed in an appendix.

I hope you find the material helpful and invite you to send us comments on how to make future editions even more useful.

Emerson J. Elliott
Acting Commissioner of
Education Statistics

Acknowledgments

The Condition of Education was prepared in the National Center for Education Statistics (NCES), Office of Educational Research and Improvement (OERI), by the Indicators and Multilevel Studies Branch of the Crosscutting Education Statistics and Analysis Division under the general supervision of Jeanne E. Griffith, Acting Division Director.

Curtis O. Baker, Acting Chief of the Indicators and Multilevel Studies Branch, coordinated the development and production of this edition after taking over from Carlyle Maw, who is now in the NCES Office of the Chief Statistician. Laurence Ogle, Gayle Rogers, and Mark Schwartz of the branch contributed indicators, both new and updated. Mary Frase was consulted for technical guidance and provided a challenge to improve the readability of the indicators. Brenda Wade helped type the manuscript and assemble the final document.

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Cynthia Hearn Dorfman from Information Services of OERI directed the publication of this edition with help from Lance Ferderer and Kate Dorrell. Phil Carr designed the cover.

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Overview

Introduction

Institutions of higher education are being challenged to prepare students to deal with the complex problems facing the country, including the demands of increasingly competitive world markets and long-term economic and technological growth. Growing emphasis on the need to evaluate what colleges teach and what college students study and learn is, at least in part, a response to these issues.

Colleges and universities also face pressure to curb increasing costs. Rising tuition levels have caused considerable concern about students' ability to afford college education. As a result, the public has turned its attention to how higher education institutions spend their money and how much they charge students in tuition and fees. Another problem confronting these institutions concerns the enrollment of low income and minority students in higher education.

The indicators in this volume provide information important to the public debate of these and related issues. On the positive side, enrollments in colleges and universities continued to grow in size and diversity in the 1980s. Enrollments increased despite a decline in the traditional, college-age population. The total number of degrees and the number awarded to racial and ethnic minorities, except blacks, also increased. A college education continued to make an important difference in workers' earnings. Research and development expenditures at academic institutions grew considerably. Faculty salaries recaptured some of their earlier losses in purchasing power.

Some less encouraging trends also occurred in the 1980s. Tuition increased substantially, as did most types of higher education expenditures. A smaller percentage of Americans earned degrees in scientific and engineering fields, while the foreign student presence in these fields—especially at the graduate level—grew. These trends have created concern about the country's ability to replace an aging work force and to remain competitive internationally. Finally, despite population growth and stable participation rates, the number of degrees earned by black males decreased at all degree levels.

Context

Higher education has been confounding prognosticators for years. Despite the decline in the 18- to 24-year-old population, enrollments have not declined, but rather have increased (*Indicators 2:16* and *2:18*). While the number of individuals in the traditional age group of most college students (18- to 24-year-olds) has declined, their participation rate has increased. At the same time, the participation rate of those over the age of 25 has also increased (*Indicator 2:18*). Enrollment of part-time students and women students continues to increase (*Indicator 2:17*). However, after years of increasing participation by blacks and Hispanics, the participation rates for these groups were no higher in 1986 than in 1976 (*Indicator 2:19*). The increase in enrollment, therefore, has carried with it long-term changes altering the student body in ways that have challenged the system.

Outcomes

Students in higher education have become more oriented towards business and technology. Both the share and the number of students completing degrees in education and the liberal arts have declined, while those in business, computer sciences, and engineering have increased (*Indicators 2:3* and *2:4*). These changes in the selection of majors are pervasive among all students. They have occurred in all racial/ethnic groups (*Indicator 2:6*).

Women have increased their percentage of degrees earned in higher education at all degree levels (*Indicator 2:7*). They have also dramatically increased their numbers of degrees in areas that used to be dominated by men, such as business, engineering, and computer science, as well as many other fields (*Indicator 2:8*).

Foreign students now account for more than 20 percent of master's degrees in mathematics, computer science, and engineering. They also account for more than 25 percent of the doctor's degrees in these same three fields, with the total in engineering over 40 percent (*Indicator 2:9*).

The attainment of a degree, whether bachelor's, master's, doctor's, or first-professional is a step on the way to employment. In general, the percentage of 25- to 34-year-olds who have completed 4 years of college has stabilized in the past few years. Degrees awarded to minorities are not increasing consistent with their participation (*Indicator 2:19*). Nor is the rate of degree attainment increasing in general (*Indicator 2:5*). This is particularly problematic for blacks, because the financial advantage of a college degree over a high school diploma is great, and this advantage is greater for blacks than for whites (*Indicator 2:10*).

Financing of Higher Education

The sources of revenues for institutions of higher education have not changed in recent years (*Indicator 2:12*). While the revenue sources have been relatively stable, expenditures per full-time-equivalent student, including those for instruction, have been increasing at a faster rate than inflation (*Indicator 2:13*). Faculty salaries, while increasing, are still lower in constant dollar terms than they were in the 1970s (*Indicator 2:14*). While the total amount of research and development spending has continued to increase in recent years, the proportion attributed to the Federal Government has been declining. Institutions have been replacing those funds with funds from industry and their own institutional resources (*Indicator 2:11*).

Conclusion

The indicators presented in this volume provide insights into the condition of colleges and universities. Higher education has reached a plateau. Participation rates of minorities and women seem to have stabilized, as have educational attainment levels. But some indicators suggest considerable progress while others identify potential problems.

Discouraging indicators show that the numbers of degrees awarded to men, particularly black men, have gone down. Foreign students are increasingly dominant at the higher degree levels in engineering. There is a distinct shift away from concentration in the liberal arts to business and technology. Also discouraging are the rapidly rising tuition levels and the lagging faculty salaries that fall behind the levels of the early 1970s.

Encouraging indicators are those showing that more students over 25 are participating in higher education and that women have moved into many fields in which their representation has been low. Research and development funds have not declined despite reductions in Federal funding.

Indicators of Postsecondary Education

A. Outcomes

A. Outcomes: Completions

Indicator 2:1 Trends in higher education attainment

- **The proportion of young adults (25 to 34 years old) with some college education rose more than 50 percent during the 1970s, and then remained level in the 1980s.**
- **In 1988, nearly 5 out of 20 young adults had completed 4 or more years of college, while more than 7 of 20 had completed at least 2 years and about 9 of 20 had completed at least 1 year.**

The Nation's educational growth has an impact on its social and economic life, affecting the welfare of individuals, families, and the Nation as a whole. Trends in years of college completed indicate changes in the educational level of the country's work force and thus provide clues to current and future socioeconomic conditions.

The pattern of higher education attainment of the 25- to 34-year-old population is shown below.

Year	Years of college completed		
	1 or more	2 or more	4 or more
		Percent	
1970	30	24	16
1976	41	34	23
1982	45	37	24
1988	45	37	24

Despite gains made by blacks and Hispanics, minority attainment in higher education still lags behind that of whites. For blacks, rates of college attendance, * after rapid growth in the 1970s, stabilized in the 1980s at a little over 33 percent. Hispanic rates increased in the 1980s, but at 29 percent in 1988, their attendance rates still remain below those for both whites and blacks.

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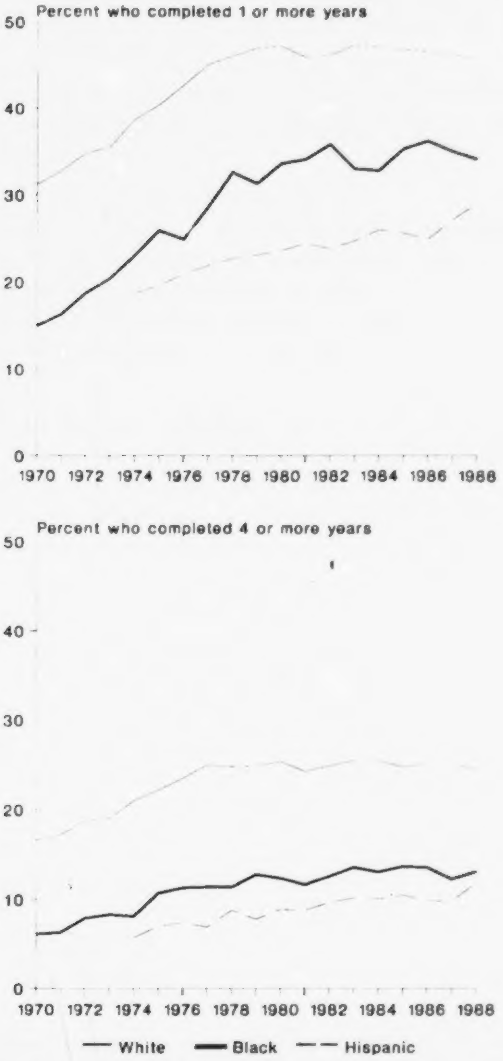
* For purposes of this indicator, "college attendance" is defined as completing at least 1 year of college.

SOURCE: U.S. Department of Commerce, Bureau of the Census, "Educational Attainment in the United States," various years, *Current Population Reports*, Series P-20 and unpublished tabulations from the March supplement to the Current Population Survey.

Chart 2:1 Trends in the number of years of college completed by 25- to 34-year-olds: 1970–1988



SOURCE: Bureau of the Census, *Current Population Reports*, various years.

A. Outcomes: Completions

Indicator 2:2 Degrees conferred, by level

- **The total number of degrees conferred by American colleges and universities increased 31 percent between 1971 and 1983, but growth has been flat since then.**
- **Associate and first-professional degrees showed the greatest proportionate increases during the 1971 through 1986 period, rising 77 and 95 percent, respectively.**

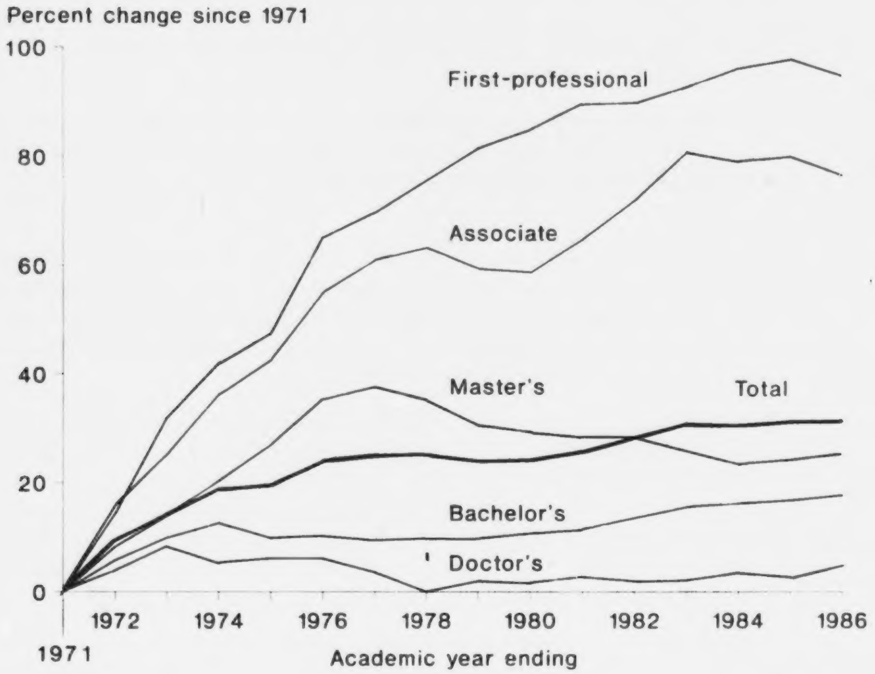
Trends in the number of degrees conferred provide a sense of the productivity of the Nation's system of colleges and universities and provide clues to the level of trained individuals in the society. In the last 15 years, the number of degrees awarded annually rose from 1.4 to 1.8 million. The numbers and relative growth at each degree level contrasted substantially, however, reflecting changing interests and educational goals of students.

Between 1971 and 1986, the number of bachelor's degrees conferred rose 18 percent, from nearly 840,000 to nearly 988,000. This growth was not steady, however. The number climbed during the early- to mid-1970s, but then fell sharply in 1975 and remained relatively level through the latter half of the decade. In 1980, a consistent upswing began. The number awarded in 1986 represented an all-time high.

Associate and first-professional degrees grew rapidly over much of the period. Recently, however, growth at these levels has tapered off or declined. Master's degrees, following substantial growth in the early- and mid-1970s, declined consistently until 1984, but then shifted upward slightly. The number of doctor's degrees changed very little over the 1971 through 1986 period, ranging from a low of a little over 32,000 in 1971 to a high of nearly 35,000 in 1973.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1988* (based on the HEGIS survey Degrees and Other Formal Awards Conferred, various years).

Chart 2:2 Percent change in the number of degrees conferred since 1971: Academic years ending 1971–1986



SOURCE: U.S. Department of Education, National Center for Education Statistics, surveys of degrees conferred, various years.

Indicator 2:3 Bachelor's degrees conferred, by field

- **Although the total number of bachelor's degrees increased between 1971 and 1986, the number and proportion conferred in the humanities, social and behavioral sciences, natural sciences, and education fell. Education experienced the sharpest decline.**
- **Over the same period, the number and proportion of degrees conferred in the computer sciences, engineering, business and management, and other technical/professional fields rose substantially.**

Shifts in student preferences for fields of study, as reflected in changes in the number and proportion of bachelor's degrees conferred in different fields, can profoundly affect the demand for courses and the supply in various job markets. For this reason, college administrators, employers, employment analysts, and others keenly follow the trends in bachelor awards.

Between academic years ending 1971 and 1986, student interest in the social and behavioral sciences and in education dropped substantially. The decline occurred over most of the period but has slowed or leveled off recently. Interest in the humanities and in the natural sciences also dropped during the period. The drop in the number of degrees conferred in the natural sciences (life sciences, physical sciences, and mathematics) was due to sharp declines in mathematics degrees which fell each year between 1971 and 1981 before turning upward.

Other fields became more popular during the period. Interest in both the computer sciences and engineering increased considerably. Business and management and other technical/professional fields * grew dramatically as well. The proportion of bachelor's degrees earned in the latter two categories combined grew from 23 to 43 percent between 1971 and 1986.

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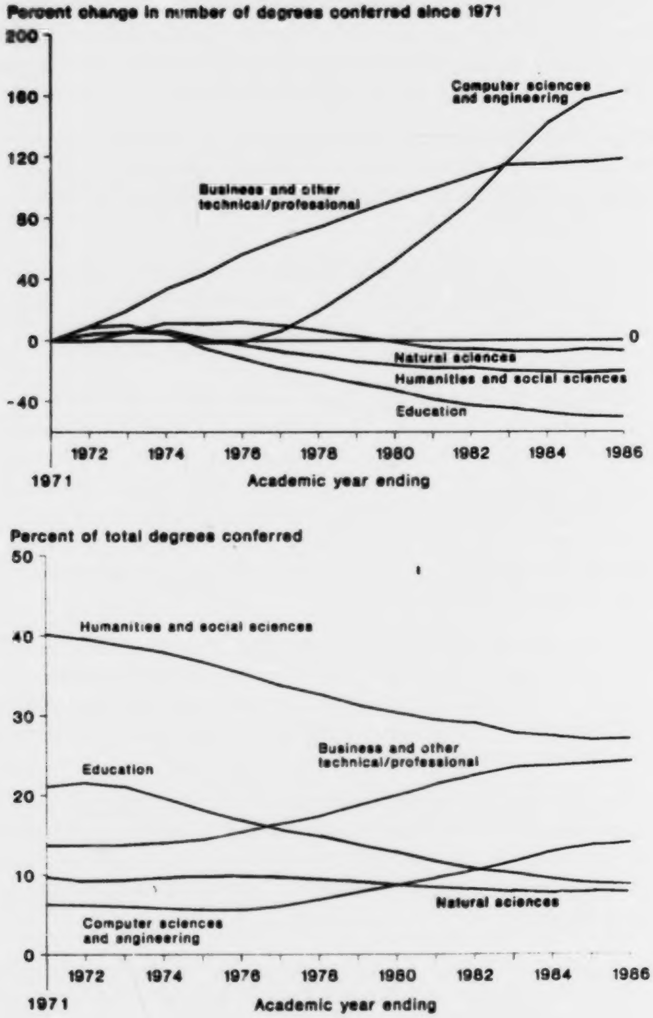
* Other technical/professional fields are: agriculture, architecture, communications and communications technologies, health sciences, home economics, law, library science, military science, parks and recreation, protective services, and public affairs.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1988* (based on the HEGIS survey Degrees and Other Formal Awards Conferred, various years).

Chart 2:3 **Bachelor's degrees conferred, by field of study: Academic years ending 1971–1986**



SOURCE: U.S. Department of Education, National Center for Education Statistics, surveys of degrees conferred, various years.

Indicator 2:4 Advanced degrees conferred, by field

- **The number and proportion of master's degrees conferred in the humanities, social and behavioral sciences, natural sciences, and education were lower in 1986 than in 1971, whereas those in the computer sciences and engineering, business, and other technical/professional fields were substantially higher.**
- **At the doctoral level, the number and proportion of degrees conferred in the natural sciences and in engineering were lower in 1986 than in 1971, while the number and proportion in other fields were higher or about the same.**

Trends in students' fields of concentration provide important information on changing student interests and responses to the labor market. They may also provide clues about ongoing or future changes in the demand for faculty in different disciplines.

Since 1971, the distribution of master's degrees has shifted away from the humanities, social and behavioral sciences, and education toward business and other technical/professional fields.* The most dramatic change has occurred in the balance between education and business degrees. In 1971, education was by far the most popular field at the master's level. Since the mid-1970s, however, specialization in education has decreased, while it has grown markedly in business. As a result, by 1986, the two fields were about equally popular, each accounting for about one-quarter of all master's degrees.

Specialization in the natural sciences (life sciences, physical sciences, and mathematics) at the master's level, particularly in mathematics, declined during much of the period from 1971 to 1986. Computer and information sciences grew substantially in popularity throughout the period. Engineering gained in the 1980s following a decline in the previous decade.

The total number of doctor's degrees conferred annually changed very little between 1971 and 1986. While the number of degrees in many fields increased, there were significant declines in the natural sciences and in engineering: mathematics degrees declined 38 percent, physical sciences 19 percent, life sciences 8 percent, and engineering 6 percent.

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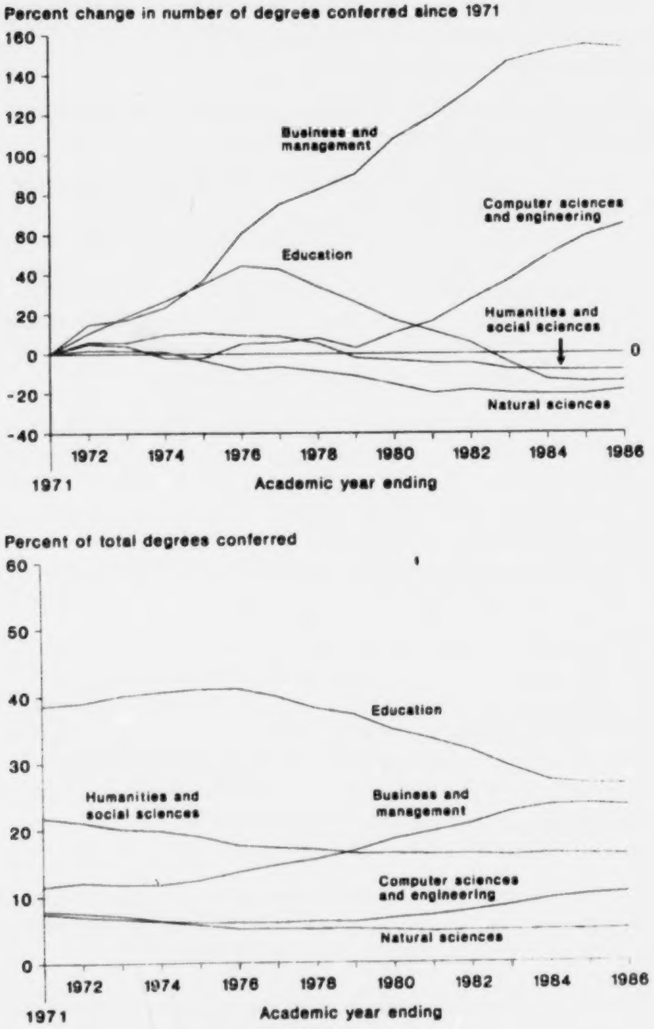
* Other technical/professional fields are: agriculture, architecture, communications and communications technologies, health sciences, home economics, law, library science, military science, parks and recreation, protective services, and public affairs.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1988* (based on the HEGIS survey Degrees and Other Formal Awards Conferred, various years).

Chart 2:4 Master's degrees conferred, by field of study: Academic years ending 1971–1986



SOURCE: U.S. Department of Education, National Center for Education Statistics, surveys of degrees conferred, various years.

Indicator 2:5 Degrees conferred, by race and ethnicity

- **Despite an increase in the young adult, black population, blacks earned fewer bachelor's, master's, and doctor's degrees in 1985 than in 1977. They did earn more first-professional degrees, however.**
- **Between the same years, whites earned fewer master's and doctor's degrees but more bachelor's and first-professional degrees.**
- **The number of degrees earned by Hispanics, Asians, and American Indian/ Alaskan Natives increased at all levels.**

The ability of our colleges and universites to attract and retain minority students is important to the Nation's success in achieving its goal of equal opportunity. Change in the number of degrees earned by minorities in relation to their population provides one measure of higher education's progress toward this goal.

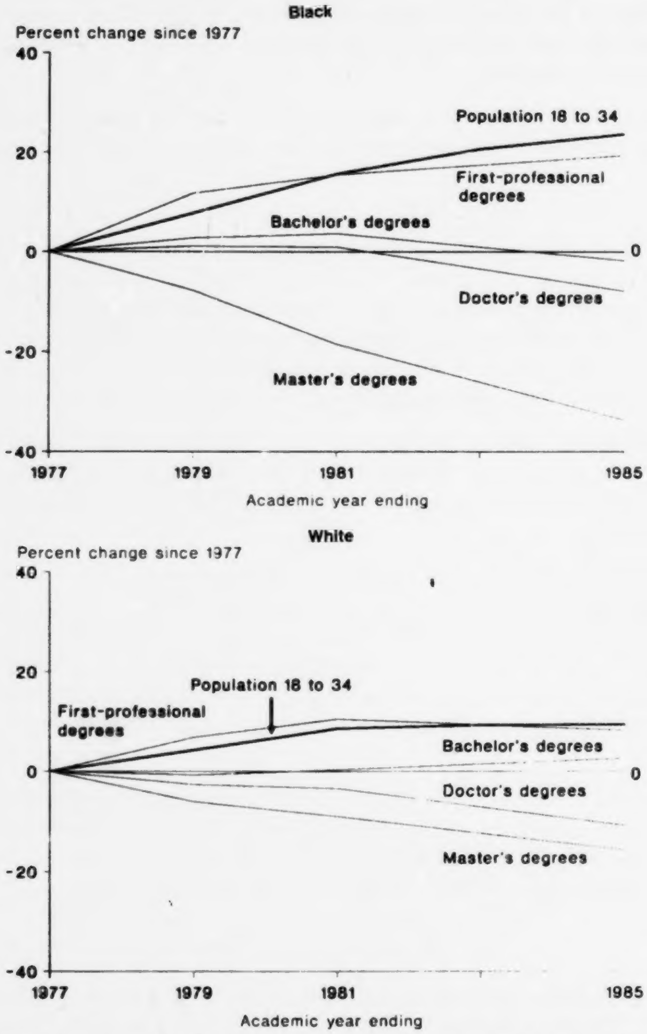
Between 1977 and 1985, changes in the number of degrees earned by blacks and whites at the various degree levels exhibited some similarities. Both groups earned fewer master's and doctor's degrees and more first-professional degrees in 1985 than in 1977. In addition, except at the master's level, men of both races earned fewer degrees at all levels, whereas women of both races earned more. Finally, among men, the declines were as sharp among whites as among blacks at all but the master's level.

Despite the similarities, there were important differences between the two racial groups. In general, growth in the young adult population (ages 18 to 34) outpaced degree growth to a much larger extent among blacks than among whites. The black young adult population grew 24 percent between 1977 and 1985, but the number of bachelor's and advanced degrees awarded to blacks fell by 2 and 27 percent, respectively. In contrast, the white young adult population increased 9 percent, while the number of bachelor's degrees awarded to whites increased 3 percent and the number of advanced degrees decreased 11 percent.

Another difference between the two racial groups is the size of the changes in degrees earned by women. The increases were smaller and the declines sharper, in percentage terms, among black than among white women.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics*, various years (based on the HEGIS survey Degrees and Other Formal Awards Conferred). U.S. Department of Commerce, Bureau of the Census, "Estimates of the Population of the United States, by Age, Sex, and Race," *Current Population Reports*, Series P-25, Nos. 917 and 1000.

Chart 2:5 **Percent change since 1977 in population and number of degrees earned by blacks and whites: Selected academic years ending 1977–1985**



SOURCE: U.S. Department of Education, National Center for Education Statistics and Office for Civil Rights, surveys of degrees conferred, various years. Bureau of the Census, *Current Population Reports*, Series P-25, Nos. 917 and 1000.

Indicator 2:6 Field of study, by race and ethnicity

- **The proportion of bachelor's degrees conferred in the natural sciences remained about the same during the period from 1977 to 1985 among both minority and white students.**
- **At all degree levels, engineering was generally more popular in 1985 than in 1977 among students in all racial/ethnic groups, especially among Asian students.**

The fields pursued by college students from different racial/ethnic groups affect the career opportunities open to those from different backgrounds and the racial/ethnic distribution of different occupations. One issue currently of concern is that the level of minority students specializing in science and engineering is low. According to one view, the country needs to encourage minorities to pursue studies in these fields in order to help avert a potential national manpower shortage.*

Racial/ethnic groups differ substantially in the fields they study. The most pronounced differences from 1977 to 1985 were in the proportion of degrees earned in the natural sciences (life sciences, physical sciences, and mathematics), engineering, and education.

The natural sciences and engineering were much more popular among Asian students than among the students of any other racial/ethnic group during the 1977 through 1985 period. At all levels, the proportion of degrees conferred in engineering was generally higher in 1985 than in 1977 among students in all racial/ethnic groups. This growth was low to moderate, however, among all but Asian students. In contrast, the natural sciences did not become more popular during the period in any of the groups.

With few exceptions, the field of education declined in popularity among students at all degree levels, regardless of their race/ethnicity. The declines were steepest among black students. Despite the large drops, education remains by far the most popular field among all non-Asian minority groups at the master's level.

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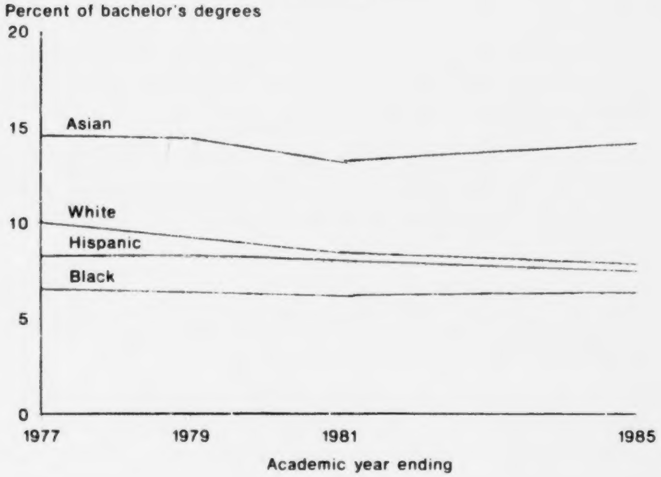
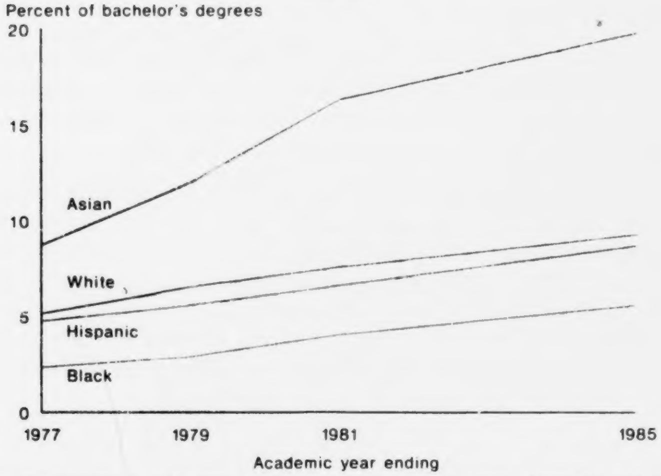
* U.S. Task Force on Women, Minorities and the Handicapped in Science and Technology, *Changing America: The New Face of Science and Engineering*, Interim Report, September 1988.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics*, various years (based on the HEGIS survey Degrees and Other Formal Awards Conferred).

Chart 2:6 Percent of bachelor's degrees conferred in the natural sciences and in engineering, by race and ethnicity: Selected academic years ending 1977–1985


Natural sciences


Engineering

SOURCE: U.S. Department of Education, National Center for Education Statistics and Office for Civil Rights, surveys of degrees conferred, various years.

A. Outcomes: Completions

Indicator 2:7 Degrees earned by women

- **The proportion of associate and bachelor's degrees earned by women increased from 43 percent at each level in 1971 to 56 and 51 percent, respectively, in 1986.**
- **The proportion of advanced and professional degrees earned by women also increased between those years. Growth was particularly dramatic at the doctor's and first-professional levels.**
- **By 1986, women were earning more than one-half of the associate degrees, about one-half of the bachelor's and master's degrees, and about one-third of the doctor's and first-professional degrees.**

Historically, women have earned substantially fewer degrees than men. A concern is whether and how much the differences between men and women have narrowed or disappeared at the various degree levels.

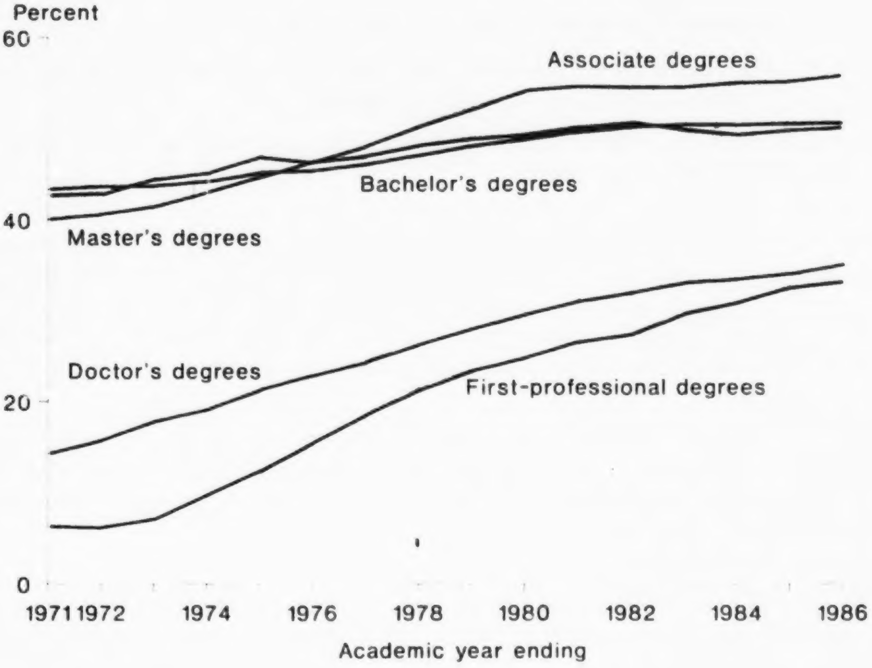
Women have increased their participation at all degree levels since 1971. Between that year and 1986, their share of associate degrees grew from 43 to 56 percent on a generally upward path. Much of this growth took place in the 1970s. Their share of bachelor's and master's degrees reached the 50 percent level in 1981, up from 43 and 40 percent, respectively, in 1971. In 1986, women continued to earn about one-half of both types of degrees.

Women also have increased their share of first-professional and doctor's degrees. In 1971, they earned only 6 percent of the first-professional degrees and 14 percent of the doctor's degrees. Since then, they have received an increasing proportion of these degrees, earning about one-third of each type in 1986.

Much of the growth in the women's share of degrees resulted from substantial increases in the number of degrees earned by women, but some occurred because of decreases in the number of degrees earned by men. At the bachelor's level, for example, the number of women earning degrees rose throughout the 1971 through 1986 period. In comparison, the number of men earning degrees at that level peaked in 1974 and then declined until 1981. Although the number of degrees earned by men has increased since then, it remains below the level of the early 1970s.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics*, 1988 (based on the HEGIS survey Degrees and Other Formal Awards Conferred).

Chart 2:7 **Percent of degrees earned by women, by degree level: Academic years ending 1971–1986**



SOURCE: U.S. Department of Education, National Center for Education Statistics, surveys of degrees conferred, various years.

Indicator 2:8 Fields of study among women

- **Women earned an increasing share of bachelor's and master's degrees awarded in business and management between 1971 and 1986.**
- **During that period, women made solid gains in other fields as well, including the life, physical, and computer sciences.**
- **In general, women increased their presence in most major fields at all degree levels over those years.**

Since the early 1970s, women have increased their share of degrees at all levels. An important question is whether the gains have occurred in all fields of study or have been more pronounced in some than in others. A related question is whether women have increased their presence in fields where they were previously underrepresented or primarily in fields that traditionally have attracted more women.

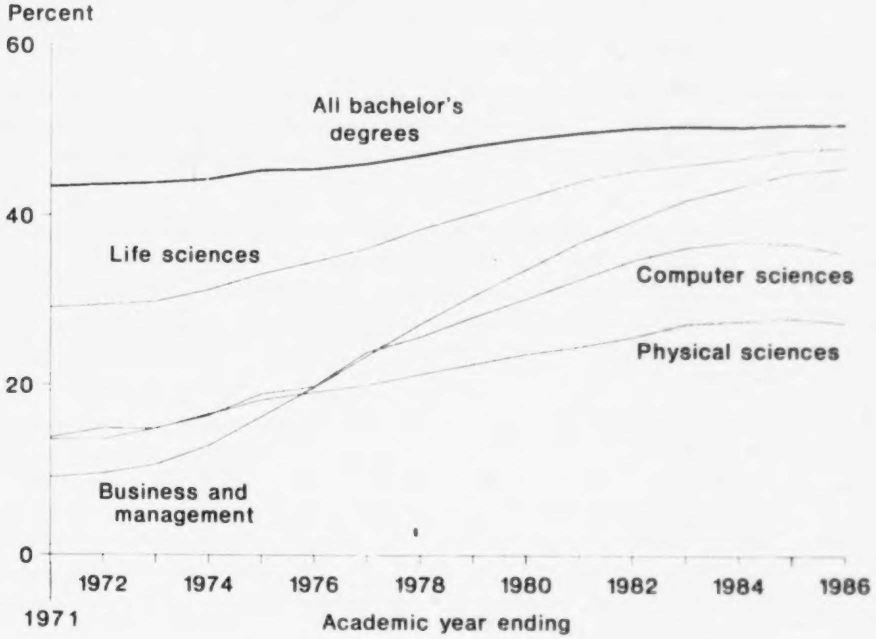
Between 1971 and 1986, women increased their share of degrees in nearly all major fields at all degree levels. Most of these gains occurred because women were earning more degrees in the fields. Some of the gains, such as in mathematics, however, were largely the result of substantial declines in the number of degrees awarded to men.

The most notable gain, reflecting sizable increases in both the number of degrees awarded to women and women's preferences for the field, was in business and management. Over the 1971 through 1986 period, the proportion of business and management degrees awarded to women rose from 9 to 46 percent at the bachelor's level and from 4 to 31 percent at the master's level.

Women made important inroads in the life, physical, and computer sciences, as well. At all levels, they received a larger number and share of the degrees conferred in each of these fields in 1986 than they did in 1971. Despite substantial gains, however, women have not reached parity with men in many scientific and technological fields. They continue to earn a much smaller proportion of the degrees conferred at all levels in the physical and computer sciences, engineering, and, except at the bachelor's level, mathematics.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics*, 1988 (based on the HEGIS survey Degrees and Other Formal Awards Conferred, various years).

Chart 2:8 Percent of bachelor's degrees in selected fields earned by women: Academic years ending 1971–1986



SOURCE: U.S. Department of Education, National Center for Education Statistics, surveys of degrees conferred, various years.

Indicator 2:9 Degrees earned by foreign students

- **From 1977 to 1985, foreign students earned an increasing proportion of the bachelor's and graduate degrees awarded by American colleges and universities.**
- **The presence of foreign students is most pronounced at the master's and doctor's levels, particularly in the natural and computer sciences and engineering, where they earned about 1 out of every 4 degrees in 1985.**

The size of the foreign student population in the Nation's colleges and universities is significant for several reasons. It can affect enrollment levels and, in turn, influence the amount and allocation of material, personnel, and financial resources. It may also affect U.S. economic competitiveness, depending on whether students stay in this country to work or whether they return to their homelands after completing their studies.

Between academic years ending 1977 and 1985, the number of foreign students [1] graduating from American higher education institutions and the proportion of degrees awarded to these students rose at all degree levels. Much of the increase occurred in the natural sciences, especially mathematics, the computer sciences, and engineering, but considerable growth took place in nonscientific fields, as well. In contrast to foreign students, the number of Americans receiving master's and doctor's degrees declined, and the number receiving baccalaureate degrees increased comparatively little.

An important question in assessing the economic impact of foreign students is whether they return to their countries after receiving their degrees or remain in this country for further study or work. Of those earning doctorates in the natural and computer sciences and engineering in 1987, 36 percent had definite plans for employment or postdoctoral study in the United States.[2] Ten years earlier, 28 percent had had such plans.

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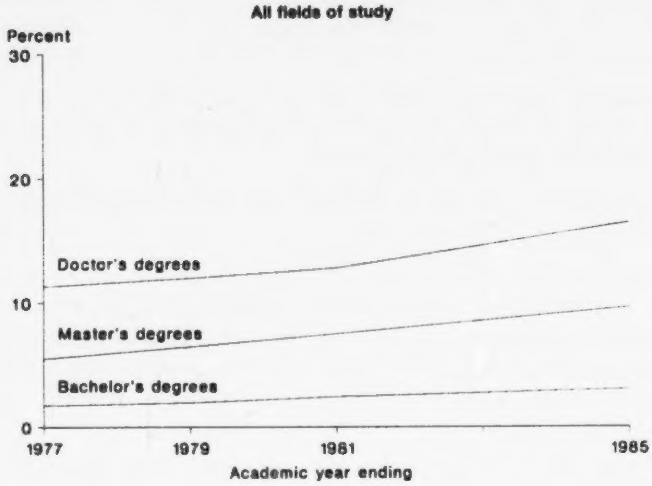
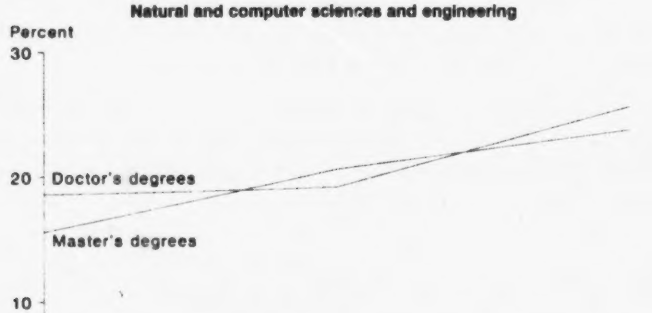
[1] Foreign students are non-United States citizens holding temporary visas.

[2] Information on postgraduation plans is available only for doctorate recipients.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics*, various years (based on the HEGIS survey Degrees and Other Formal Awards Conferred). National Science Foundation, *Science and Engineering Doctorates: 1960–86, Early Release of Summary Statistics on Science and Engineering Doctorates 1987*, and unpublished tabulations (based on the Survey of Earned Doctorates).

Chart 2:9 Percent of degrees earned by foreign students in American colleges and universities: Selected academic years ending 1977–1985





SOURCE: U.S. Department of Education, National Center for Education Statistics, surveys of degrees conferred, various years.

Indicator 2:10 Earnings of young adults, by educational attainment

- **Among young adults working year-round and full-time, the college-educated generally earned more annually during the 1978 to 1988 period than those who had completed only 4 years of high school, regardless of race or sex.**
- **The earnings advantage of the college-educated was more pronounced among those who had completed 4 or more years of college than among those who had completed only 1-3 years.**
- **Among those with 4 years of college, the earnings advantage was most substantial among women and blacks.**

Numerous studies have examined the effects of education on an individual's earning potential.[1] There is considerable disagreement about how education affects earnings, how great the effect is, and the influence of other factors, such as innate ability and socioeconomic status. Still, most agree that there is a link between the amount of education one receives and one's earnings.

From 1978 to 1988, college-educated young adults, regardless of race or sex, earned more than young adults with only a high school education.[2] This earnings gap was greater for those who had completed 4 or more years of college than for those who had completed 1-3 years. To illustrate, in 1988, whites with 4 or more years of college earned 41 percent more than whites with 4 years of high school, whereas those with 1-3 years of college earned only 12 percent more.

The earnings advantage of college-educated young adults with at least 4 years of college was most pronounced among women and among blacks. College-educated men and whites also had an earnings advantage, but it was less prominent.

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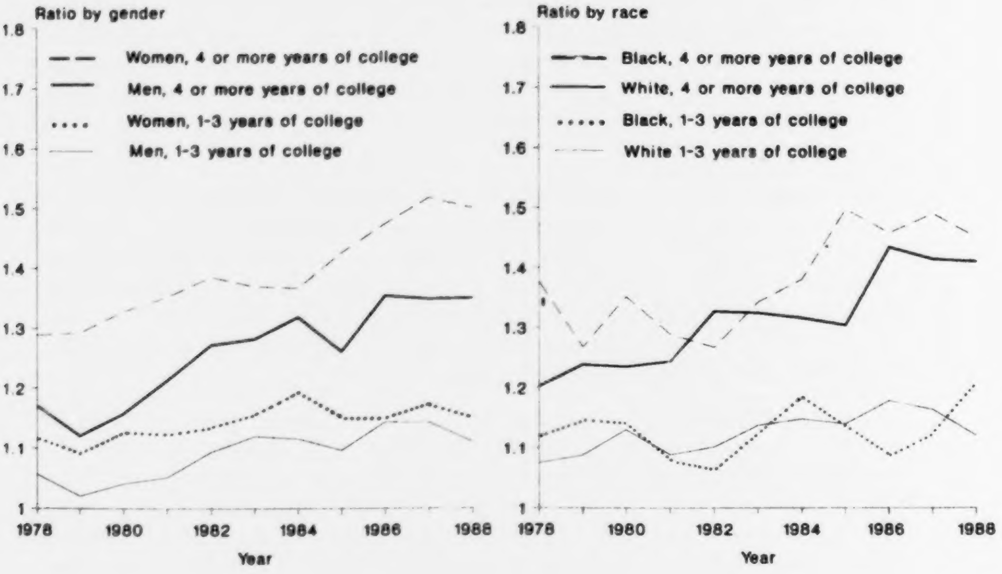
[1] E.A. Hanushek, "The Economics of Schooling: Production and Efficiency in Public Schools," *Journal of Economic Literature 24*, (1986): 1141-1177.

[2] The young adults discussed here were 25- to 34-year-old black, white, male, and female year-round, full-time workers.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, March of various years, unpublished tabulations.

Chart 2:10 Ratio of earnings of year-round, full-time workers, 25–34 years old, with college to earnings of those with 4 years of high school: 1978–1988



SOURCE: Bureau of the Census, *Current Population Reports*, March of various years, unpublished tabulations.

Indicator 2:11 Higher education spending on research and development

- **Doctorate-granting institutions spent increasing amounts (in constant dollars) on research and development (R&D) between fiscal years 1972 and 1987.**
- **The Federal Government remains the primary source of R&D expenditures at doctorate-granting institutions, but during the 1980s its role has been declining.**

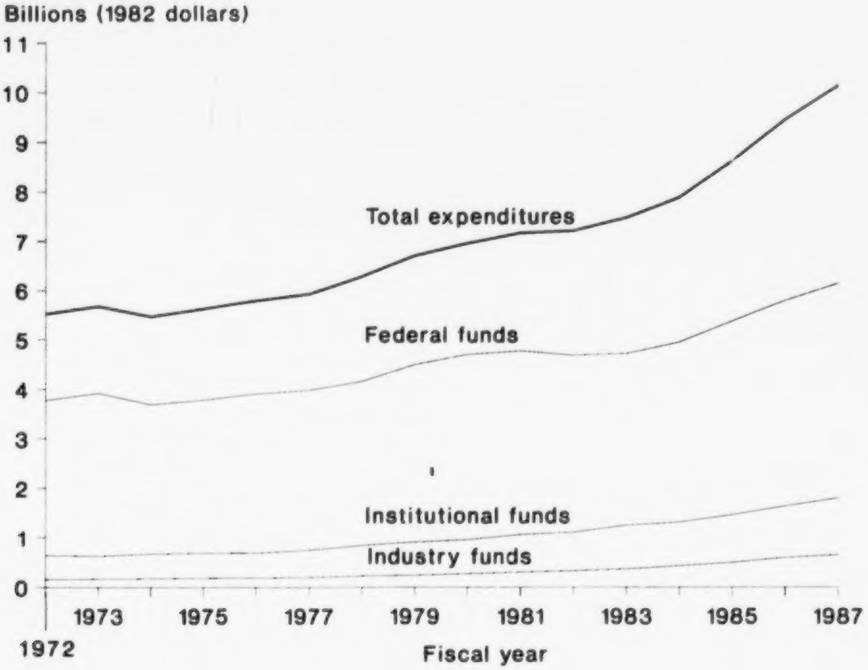
The Nation's institutions of higher education are an important source of new scientific and technological knowledge. Much of this knowledge comes from doctorate-granting institutions, which spend nearly all the R&D funds available to higher education. The condition of the R&D effort at those institutions is, therefore, viewed by many as vital to the Nation's economic health and its competitiveness in world markets.

Between fiscal years 1972 and 1987, constant dollar R&D expenditures at doctorate-granting institutions increased by more than 80 percent. Growth occurred throughout most of the period, with a slight decline in 1974, and a slowdown in the early 1980s. The rate of growth in 1987 was lower than in the previous 2 years but higher than that for any other year during the 1972 through 1987 period. The institutions' share of total U.S. R&D spending increased during the mid- to late-1980s, regaining from declines earlier in the decade.

Federal funds remain by far the largest source of R&D expenditures at doctorate-granting institutions. Although these funds increased 63 percent, after inflation, during the 1972 through 1987 period, the relative importance of Federal funds has dropped. Federal funds constituted 61 percent of the R&D expenditures at these institutions in 1987, down from 68 percent in 1972. Over the same period, industry funds increased from 3 to 6 percent and institutional funds from 12 to 18 percent of R&D expenditures.

SOURCE: National Science Board, *Science & Engineering Indicators—1987*, 1987. National Science Foundation, *Early Release of Summary Statistics on Academic Science/Engineering Resources*, October 1988 (based on Scientific and Engineering Expenditures at Universities and Colleges survey, various years).

Chart 2:11 **Research and development expenditures, in constant 1982 dollars, at doctorate-granting institutions, by source of funds: Fiscal years 1972–1987**



SOURCE: National Science Foundation, Scientific and Engineering Expenditures at Universities and Colleges survey, various years.

B. Resources

Indicator 2:12 Revenues of colleges and universities

- **State and local appropriations are the largest source of funds for public institutions (58 percent) but a negligible source (1 percent) for private institutions.**
- **Private institutions depend primarily on tuition and fees as a source of revenue (53 percent).**

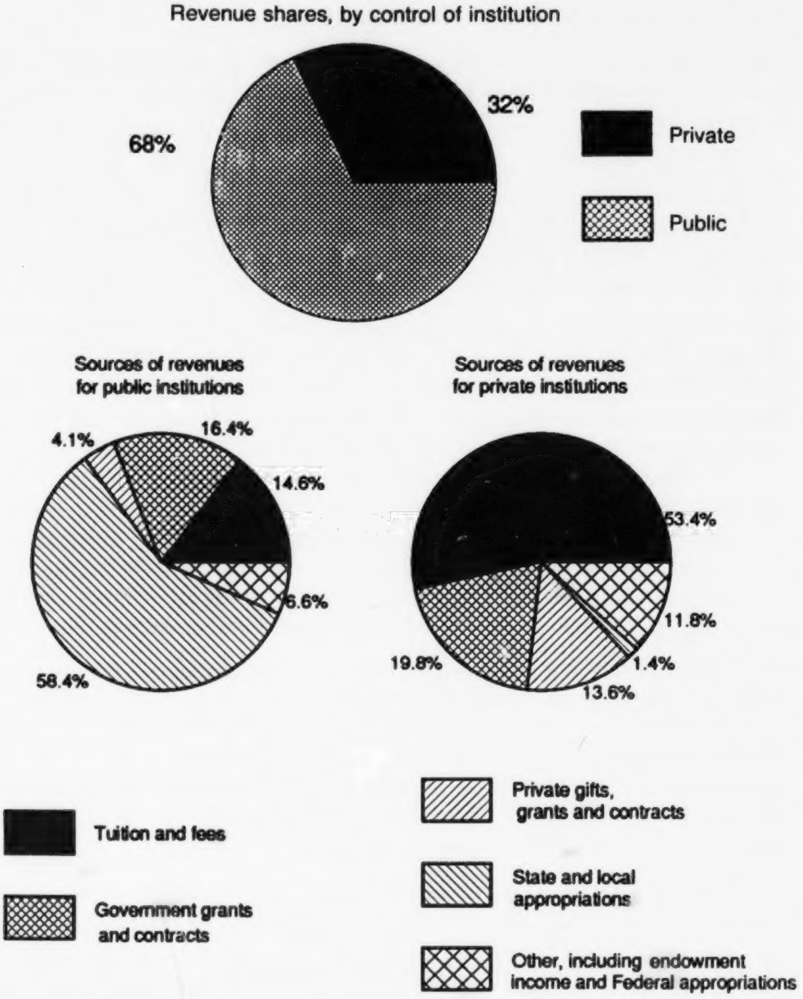
This country contains more than 3,000 colleges and universities—from community colleges, to liberal arts colleges, to professional schools, to research universities. About 1,500 of these institutions are governed by localities or by States primarily to serve their populations. Some 1,800 more are under private control, some religious and some independent. All institutions of higher education are supported by the same array of funding sources, but to widely varying degrees, depending upon whether they are publicly or privately controlled. These sources in turn are affected by a number of factors, including fluctuations in the economy and perceptions of whether investments, be they in the form of taxes, gifts, or tuition payments, are yielding expected benefits to individuals or to the country.

For public institutions, State and local appropriations were by far the most important source throughout the period from 1976 to 1986. The second most important source in 1986 was government grants and contracts, most of which came from Federal sources. In the early years of the period, however, tuition and fees had been the second largest source of revenue for public institutions.

Private institutions relied primarily on tuition and fees and secondarily on government grants and contracts during the 1976 through 1986 period. These institutions also derived a large share of their income from nongovernmental gifts, grants, and contracts (14 percent) in 1986.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1988* (based on the HEGIS surveys Financial Statistics of Institutions of Higher Education, various years, and Fall Enrollment in Colleges and Universities, various years).

Chart 2:12 Shares and sources of revenues for public and private institutions of higher education: Fiscal year 1986



SOURCE: National Center for Education Statistics, *Digest of Education Statistics, 1988.*

Indicator 2:13 Allocation of expenditures per student and tuition levels

- **Expenditures for instruction, research, and administration, as well as undergraduate tuition charges, rose considerably more than inflation during the mid-1980s at both public and private universities.**
- **Since the early 1980s, tuition has increased proportionately more than instructional expenditures at all types of public and private colleges and universities.**

Rising college tuition is of considerable concern to policymakers, educators, and students and their families. Why tuition continues to climb is a hotly debated subject. Information on where colleges and universities spend their money and how expenditure patterns have changed in relation to tuition enhances the public debate.

With few exceptions, expenditures per full-time-equivalent (FTE) student, after inflation, were higher in academic year 1985–86 than in 1976–77 at all types of public and private, nonprofit institutions.* Much of the rise has occurred since the early 1980s. Administrative expenditures grew substantially, particularly at private universities, where they were 39 percent higher in 1986 than in 1977. Expenditures on instruction also grew between those years, but less than administrative expenditures. At universities and other 4-year institutions, especially public ones, expenditures on research, a major function of higher education, also were higher in 1986 than in 1977. Expenditures for scholarships and fellowships were up sharply at all types of private institutions. They increased comparatively little at public universities, however, and actually declined at other types of public institutions.

Following declines in the late 1970s, average undergraduate tuition and fees, adjusted for inflation, rose sharply at all types of public and private institutions during the first half of the 1980s. They grew proportionately more than comparable increases in instructional expenditures but, except at 2-year institutions, less than administrative expenditures. At all types of private institutions, expenditures for scholarships and fellowships grew proportionately more than tuition charges. This was not the case at public institutions, however.

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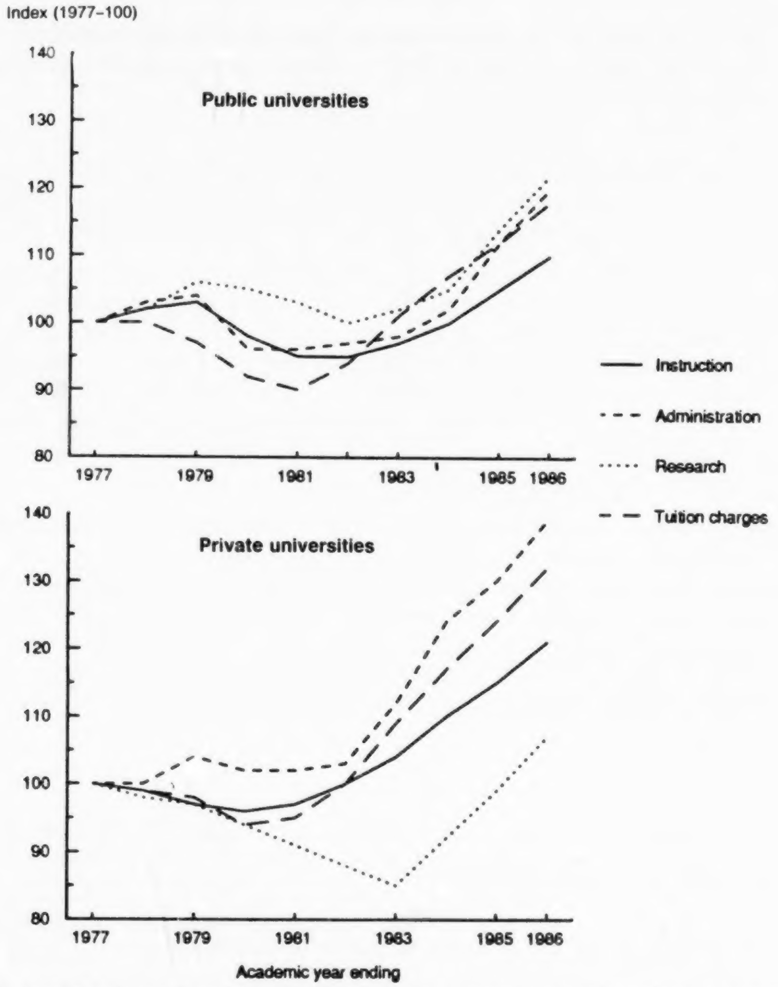
* This indicator presents expenditure data in indexed form where 1977 = 100. For actual dollars spent, see source described below.

SOURCE: U.S. Department of Education, National Center for Education Statistics, "Recent Trends in Higher Education Finance, 1976 to 1985–86," *Higher Education Administrative Costs: Continuing the Study* (based on the HEGIS surveys Financial Statistics of Institutions of Higher Education, Institutional Characteristics of Colleges and Universities, and Fall Enrollment in Colleges and Universities), 1988.

Chart 2:13 Index of selected expenditures per full-time-equivalent student and average undergraduate tuition charges (in constant dollars) at public and private universities: Academic years ending 1977–1986



SOURCE: National Center for Education Statistics, surveys of Institutional Characteristics of Colleges and Universities, Fall Enrollment in Colleges and Universities, and Financial Statistics of Institutions of Higher Education, various years.

B. Resources: Human Resources

Indicator 2:14 Faculty salaries, by academic rank

- **During most of the 1970s and into the early 1980s, college faculty salaries at both public and private institutions steadily lost ground to inflation.**
- **Since the early 1980s, faculty salaries have consistently outpaced inflation, but, by 1986, salary increases had not been large enough to restore purchasing power to early 1970s levels.**

College faculty salaries are of interest for two reasons. First, they are a significant component of college and university expenditures. Second, they can affect higher education's ability to attract and retain qualified instructional personnel.

The salaries of full, associate, and assistant professors [1] more than doubled between academic years ending 1972 and 1986. After adjusting for inflation, however, they declined substantially. Between the peak in 1973 and the low point in 1981 or 1982, their purchasing power dropped by a little over 20 percent. After that, inflation-adjusted salaries climbed steadily upward. However, by 1986, the latest year for which data are available, the increases had not been big enough to compensate for earlier losses. The trends outlined here occurred at public as well as private institutions and at universities, other 4-year, and 2-year institutions.

To get a perspective on changes in college faculty salaries, it is useful to compare them with changes in the salaries of other professions. During the 14-year period from 1971-72 to 1985-86, particularly in the late 1970s and early 1980s, the salaries of faculty increased more slowly than those of persons in six other professional occupations employed in medium-sized and large private firms.[2] The average salary of a full professor, for example, increased 130 percent over the period, whereas the average salary of an attorney increased 174 percent.

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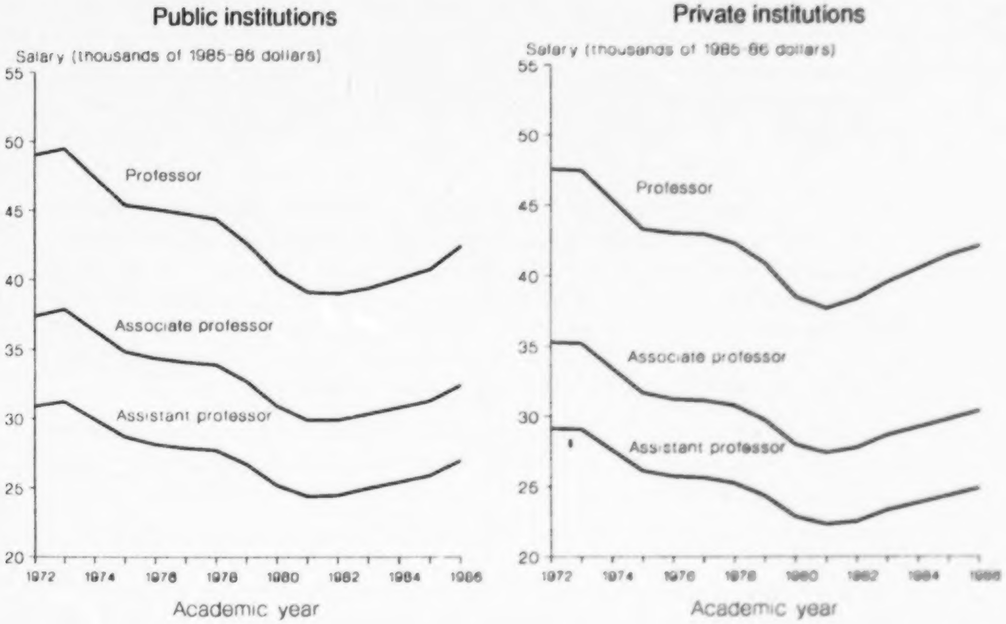
[1] This indicator displays salary changes between academic years 1971-72 and 1985-86 for three categories of full-time instructional staff on 9- or 10-month contracts—full professors, associate professors, and assistant professors.

[2] The occupations are: accountant, auditor, attorney, chief accountant, chemist, and engineer. Medium-sized and large firms are those employing 50 or more workers.

SOURCE: U.S. Department of Education, National Center for Education Statistics, the HEGIS survey Salaries, Tenure, and Fringe Benefits of Full-Time Instructional Faculty, various years. U.S. Department of Labor, Bureau of Labor Statistics, *National Survey of Professional, Administrative, Technical, and Clerical Pay, March 1982* (Bulletin 2145) and *March 1986* (Bulletin 2271).

Chart 2:14 Trends in average faculty salaries, by academic rank and control of institution: Academic years ending 1972–1986



SOURCE: National Center for Education Statistics, survey of *Salaries, Tenure and Fringe Benefits of Full-Time Instructional Faculty*, various years.

Indicator 2:15 New doctorates with jobs in higher education, by field

- **The proportion of new doctorate recipients with definite employment commitments in the United States who had jobs in American colleges and universities declined between 1971 and 1981. After 1981, the proportion with such jobs remained generally stable.**
- **The size and pattern of the declines varied depending upon the field of study. They were greatest in the social and behavioral sciences, natural sciences, and education.**

The infusion of new talent into a profession is considered important to its intellectual vitality and growth. The tightening of the academic labor market in recent years has raised several questions related to this issue. One relates to the age distribution and experience of the labor pool available to replace retiring faculty. Another concerns the vitality of the basic research program in the Nation's universities. Trend data on newly educated doctoral recipients in different fields who take jobs in colleges and universities provide information relevant to the discussion of these matters.

Among new doctorates with definite employment commitments in the United States upon completion of their degrees, the proportion with jobs in colleges and universities fell during most of the period from 1971 to 1981 and then leveled off.*

The social and behavioral sciences, followed by the natural sciences and education, experienced the greatest drop in the proportion of new doctorates entering the academic labor market between 1971 and 1981. In contrast to most fields, this downward trend continued in the social and behavioral sciences during much of the 1980s. Natural scientists were more likely to shift to industry than to other employment sectors, while educators gravitated toward elementary and secondary education. Social and behavioral scientists, on the other hand, favored nonprofit organizations.

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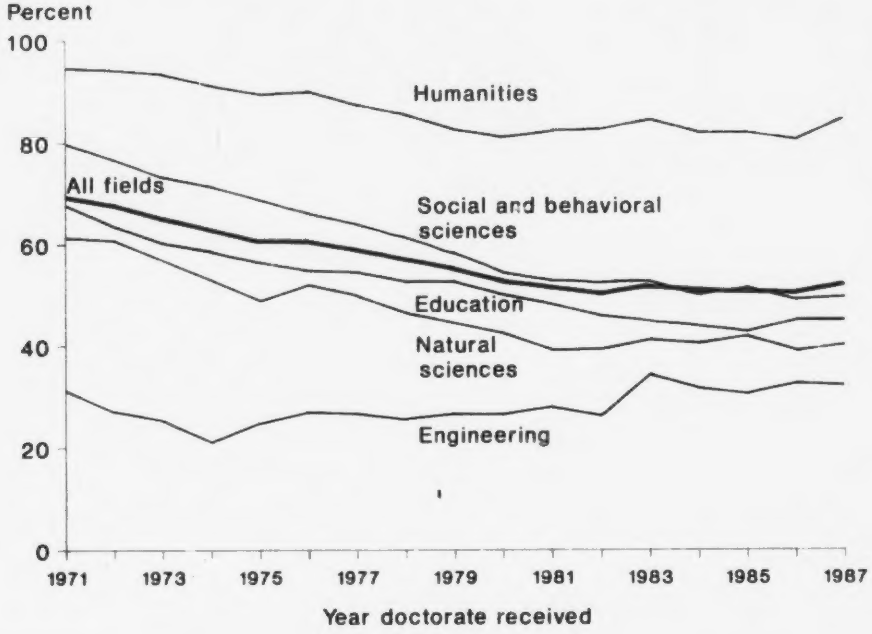
* A "definite commitment" is defined as a signed contract, acceptance of a formal offer, etc. This indicator pertains only to employment commitments in the United States. Jobs in higher education include those in teaching, research, administration, and other areas but not postdoctoral fellowships.

SOURCE: National Research Council, Doctorate Records File, special tabulations (based on the Survey of Earned Doctorates).

Chart 2:15 Percent of new doctorates with definite employment plans in the United States who had commitments at colleges and universities, by field of study: 1971–1987



SOURCE: National Research Council, Doctorate Records File.

C. Context

C. Context: Student Characteristics

Indicator 2:16 College and university enrollment, by type and control of institution

- **Total enrollment in colleges and universities increased by nearly 4 million (45 percent) between 1970 and 1983 and then increased by only 4 percent from 1983 to 1988.**
- **Between 1970 and 1983, enrollment growth was greatest in 2-year institutions, more than doubling in size from 2.2 million to almost 4.7 million students.**

Colleges and universities are regularly grouped by the predominant length of programs they offer, 2-year or 4-year, and whether they operate under public or private control. Institutions in each category address somewhat different student needs. Enrollment trends in these various types of institutions may indicate changing demand for the different types of services offered.

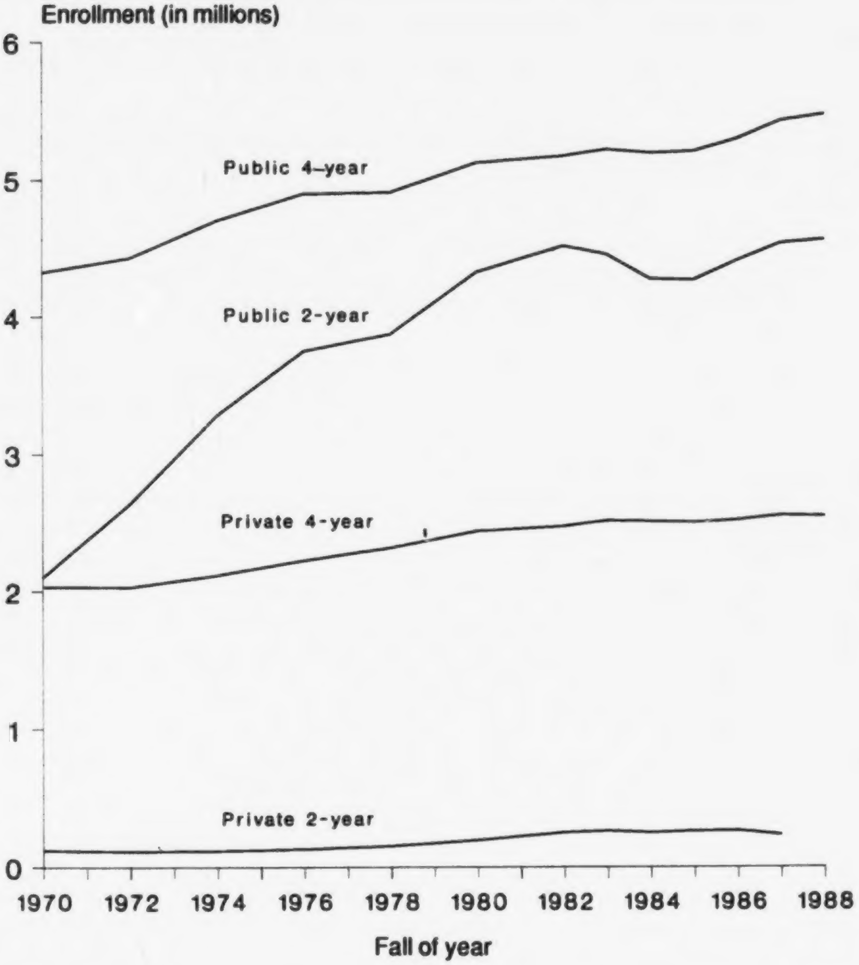
Between 1970 and 1983, enrollment in colleges and universities rose by 45 percent, from 8.6 million to 12.5 million. While the number of students at 4-year institutions grew by 22 percent, enrollment in 2-year institutions grew by 112 percent, reflecting, among other things, an increasing interest in higher education by the nontraditional, older, and part-time student. Public institutions, which enroll three times as many students as private institutions, increased their enrollments at a faster rate than private ones. Since 1983, enrollments at all types of institutions have been relatively steady, but in 1987 and 1988 enrollments were up slightly from 1985 levels.

Enrollments may also be measured in terms of full-time-equivalent students (FTE). For private schools, percent changes in FTE enrollments during the 1970s and early 1980s are not considerably different from the actual enrollments presented here. For public 2-year schools, however, the 1970–1983 enrollment increase in FTEs was only 85 percent; the headcount increase was 112 percent. The difference reflects the large number of students attending part-time (see *Indicator 2:17*).

In 1988, public institutions accounted for 78 percent of all higher education enrollment, and 2-year colleges accounted for 36 percent of all such enrollment.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1988* (based on the IPEDS survey Fall Enrollment in Institutions of Higher Education, various years); and "National Estimates of Higher Education Statistics: 1988," *Early Estimates*, December 1988.

Chart 2:16 Trends in college and university enrollment, by type and control: Fall of selected years 1970–1988



SOURCE: National Center for Education Statistics, *Digest of Education Statistics, 1988.*

C. Context: Student Characteristics

Indicator 2:17 Selected characteristics of students in higher education

- **Between 1970 and 1988, the proportion of part-time students in institutions of higher education increased from 32 to an estimated 43 percent.**
- **The proportion of women enrolled also rose during that time from 41 to 54 percent.**
- **The proportion of students 25 years old or older rose from 28 percent in 1972 to 39 percent in 1986.**

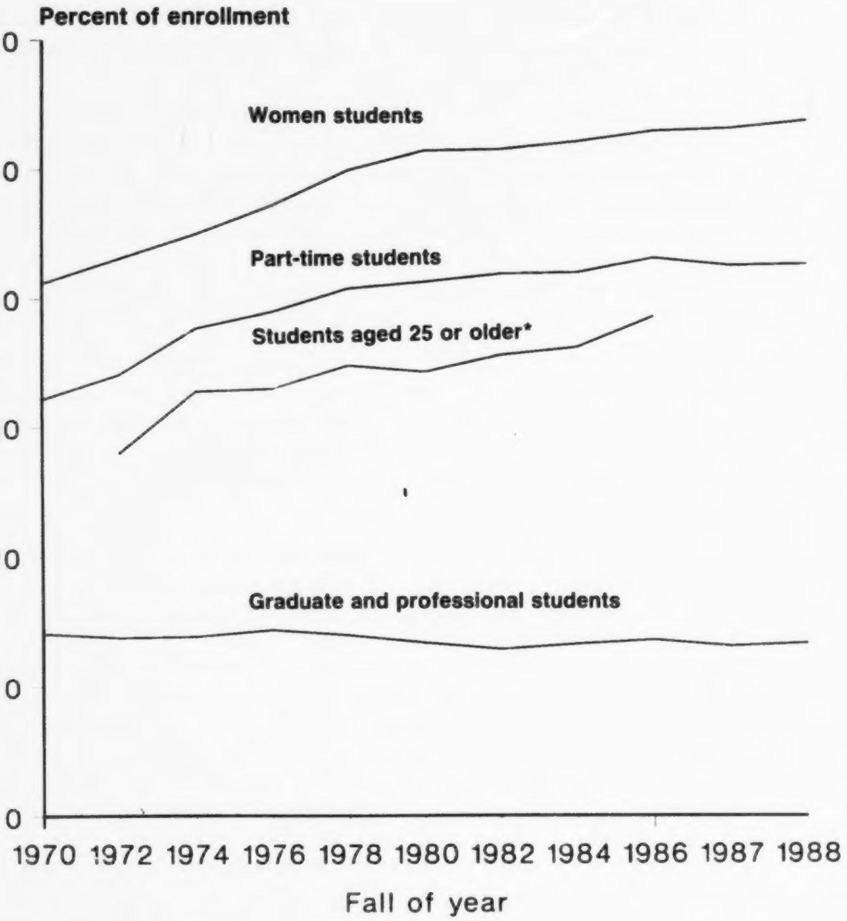
Changes in the composition of the enrollment in higher education signal changes in the larger society. For example, enrollment changes may reflect evolving needs of the labor force or a shift in the interest or ability of individuals to attend higher education.

in 1970, the "typical" college student was a male undergraduate between the ages of 18 and 24 attending full time. From 1970 to 1988, total enrollment in higher education increased substantially. But this increase was not uniform for all groups of students. While the number of all students grew, gains were proportionally greater for part-time students, women students, and older students. However, in that time, the proportion of graduate and professional students changed little. As a result of these factors, the "typical" college student in 1988 was a female undergraduate, with an increasing likelihood that she was over 25 years old, and attending part-time.

NOTE: Data for this indicator come from an NCES survey of all colleges and universities. Therefore, the enrollment figures differ somewhat from indicators where data from the Bureau of the Census survey of households are used.

SOURCES: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics*, various years, (based on an NCES survey Fall Enrollment in Colleges and Universities, various years); "National Estimates of Higher Education Statistics: 1988," *Early Estimates*, December 1988. U.S. Department of Commerce, Bureau of the Census, "School Enrollments—Social and Economic Characteristics of Students," October, various years, *Current Population Reports*, Series P-20; and unpublished tabulations.

Chart 2:17 Trends in higher education enrollment for women, part-time students, students aged 25 or older, and graduate and professional students: Fall of selected years 1970–1988



* Data for 1970, 1987, and 1988 not available.

SOURCE: National Center for Education Statistics, *Digest of Education Statistics, 1988*. Bureau of the Census, *Current Population Reports*, various years.

C. Context: Student Characteristics

Indicator 2:18 College enrollment, by selected age groups

- **Between 1980 and 1986, college enrollment increased 9 percent, while the 18- to 24-year-old population decreased 8 percent.**
- **Rises in the enrollment rates of 18- to 24-year-olds, and of persons aged 25 and older were two factors contributing to the enrollment increase.**

College education in the United States has shown enormous growth in the past 40 years. In part, this growth reflects the 20th century need of business, industry, and government for a highly skilled and educated work force. Since 1950, enrollment has swelled by over 400 percent, while the number of institutions rose almost 60 percent.[1] Throughout the past decade, however, many analysts and college administrators have expressed concern that the 1980s would be a period of declining enrollment in college education. Some analysts saw in the shrinking population of 18- to 24-year-olds evidence of coming decreases in enrollment.[2]

Contrary to these fears, although the 18- to 24-year-old population declined 7.8 percent between 1980 and 1986, total enrollment of 18- to 24-year-olds actually increased 2.4 percent. A modest increase in their participation rate (from 24.7 percent to 27.4 percent) had helped offset the decline in the age group. Without this increase in participation, enrollment in 1986 would have been 734,000 below the actual figure of about 7.4 million.[3]

The rise in college enrollment in the 1980s was also due to more older students who enrolled to prepare for career changes, to upgrade knowledge for current positions, or for enjoyment. In 1980, 2.9 percent of the population aged 25 years and over were enrolled in higher education. Between 1980 and 1986, the population in this age group increased by 12.3 percent. Had the same percentage of this age group continued to enroll in higher education, the number of students would have grown by approximately 475,000. However, a small rise in the participation rate of this population, from 2.9 to 3.2 percent, brought the enrollment increase to about 878,000. This population is growing, and an increasing number of students may come from this age group.

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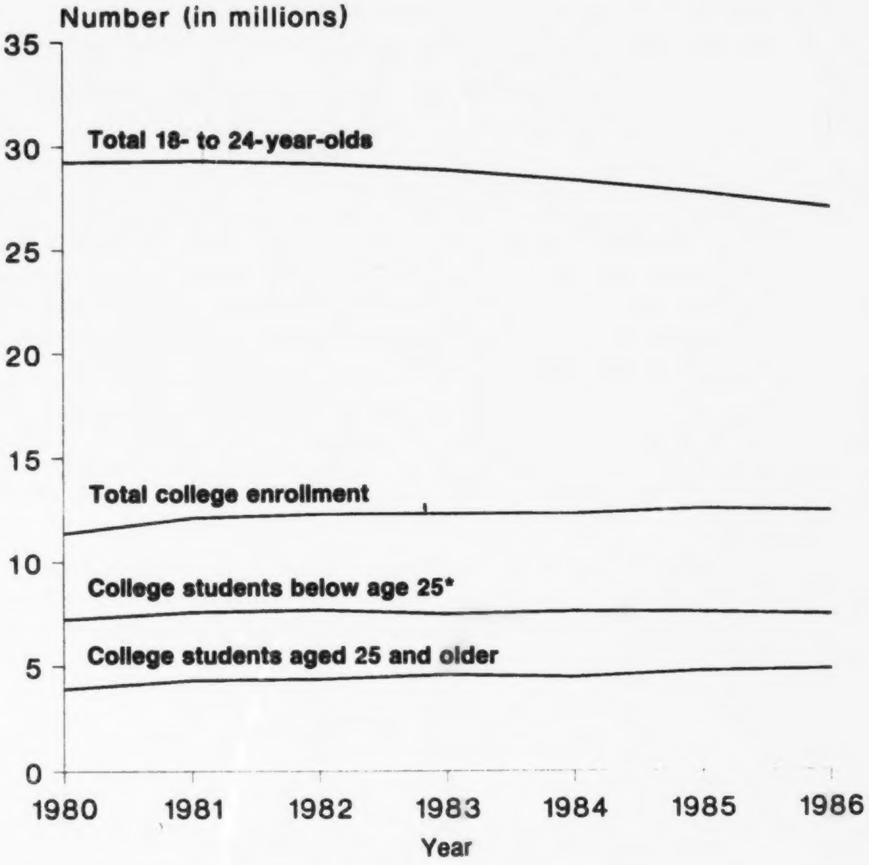
[1] U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1988*

[2] F.E. Crossland, "Learning to Cope with a Downward Slope," Change, July-August 1981; and Carnegie Council on Policy Studies in Higher Education, *Three Thousand Futures.* (San Francisco: Jossey-Bass, 1980).

[3] Data for this indicator come from a sample survey of households conducted by the Bureau of the Census. Therefore, the data differ somewhat from those used in indicators derived from the NCES surveys of the universe of colleges and universities.

Chart 2:18 Trends in college enrollment, by age and number of 18- to 24-year-olds: 1980–1986



* Below age 25 includes a few students 14 to 17.

SOURCE: Bureau of the Census, *Current Population Reports*, various years

TEXT SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1988*. U.S. Department of Commerce, Bureau of the Census, "School Enrollment—Social and Economic Characteristics of Students, October [various years]"; *Current Population Reports*, Series P-20; and unpublished tabulations.

Indicator 2:19 Enrollment patterns in higher education, by race and ethnicity

- **Among 18- to 24-year-olds, participation rates for blacks and Hispanics in higher education are below those of whites.**
- **Participation rates among whites have increased since the mid-1970s.**
- **Black and Hispanic participation rates in the mid-1980s are higher than they were in the early 1970s.**

Equal access for all qualified youth has long been a major goal of our education system. One measure of national progress toward that goal is the participation rates [1] of various populations in higher education. Changes in participation rates may reflect many different factors, such as changes in values associated with higher education, in the ability to afford higher education, or in the quality of secondary schooling. Such changes may also alert higher education institutions to the need for altering policies or offerings.

The share of whites enrolled in higher education declined in the first half of the 1970s, then held steady until it increased through the 1980s. The proportion of black and Hispanic 18- to 24-year-olds enrolled in higher education increased in the early 1970s but declined in the second half of the decade. By the mid-1980s, the rates for both groups were above those of the early 1970s.

Throughout the period, participation rates of blacks and Hispanics were lower than those of whites. Enrollment of whites between 1970 and 1980 ranged between 25 and 27 percent. Since 1983, it equalled or exceeded 28 percent. Below are the participation rates of 18- to 24-year-olds in higher education:

Year	White	Black	Hispanic [2]
1972	26	18	13
1976	27	23	20
1980	26	19	16
1986	28	22	18

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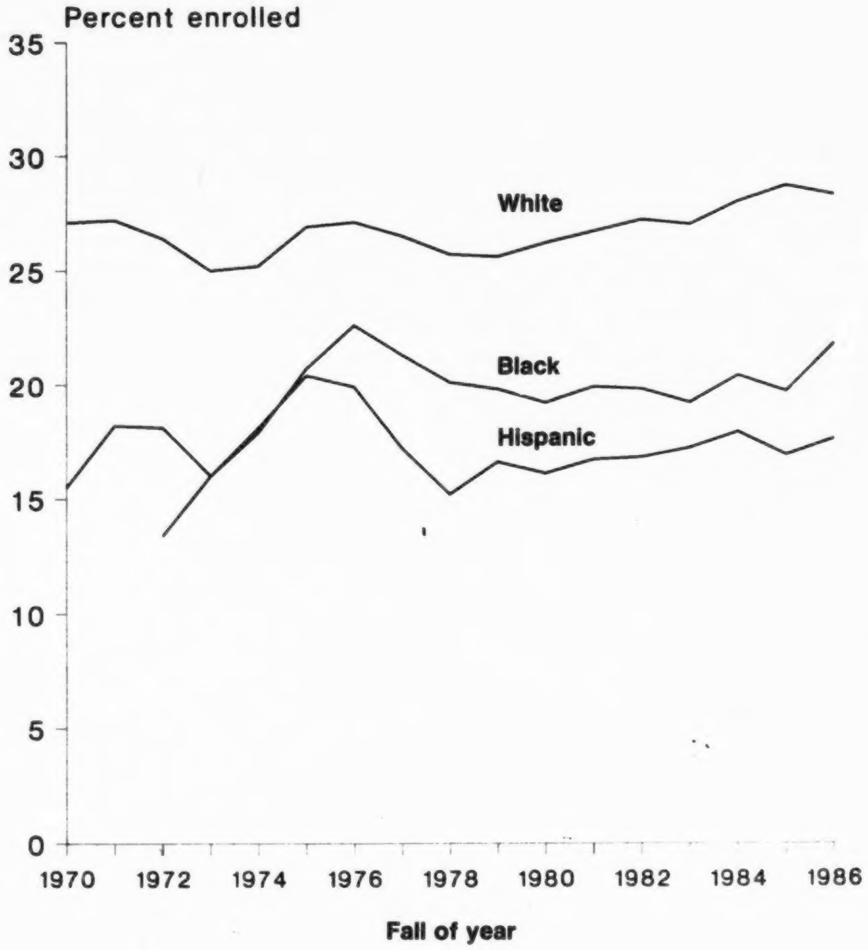
[1] Participation rates represent the proportion of a given subgroup enrolled in an institution of higher education. For example, the participation rate for 18- to 24-year-old blacks is calculated as 18- to 24-year-old black college students as a percent of all black 18- to 24-year-olds.

[2] Hispanics may be of any race.

SOURCE: U.S. Department of Commerce, Bureau of the Census, "School Enrollment—Social and economic Characteristics of Students, October [various years]," *Current Population Reports*, Series P-20.

Chart 2:19 **Trends in college participation rates of 18- to 24-year-olds, by race and ethnicity: Fall 1970–1986**



NOTE: Hispanics may be of any race.

SOURCE: Bureau of the Census, *Current Population Reports*, various years.

Tables

Indicator 2:1

Table 2:1-1 **Years of college completed by population 25-34 years old, by race and ethnicity: 1970-1988**

Year (March)	All	White	Black	Hispanic *
		Percent who completed 1 or more years		
1970	29.8	31.2	15.0	—
1971	31.3	32.8	16.3	—
1972	33.3	34.8	18.7	—
1973	34.2	35.5	20.4	—
1974	37.4	38.7	23.0	18.7
1975	39.4	40.4	25.9	19.6
1976	41.3	42.7	24.9	20.9
1977	43.6	45.1	28.6	21.9
1978	44.8	46.1	32.6	22.7
1979	45.5	47.0	31.3	23.1
1980	45.8	47.2	33.6	23.6
1981	44.9	45.9	34.1	24.4
1982	45.2	46.2	35.8	23.8
1983	46.2	47.3	33.0	24.7
1984	45.6	47.1	32.8	26.0
1985	45.8	46.8	35.3	25.6
1986	45.7	46.6	36.2	24.9
1987	45.4	46.3	35.0	27.1
1988	44.8	45.6	34.1	29.0
		Percent who completed 2 or more years		
1970	24.3	25.4	11.7	—
1971	25.2	26.5	12.2	—
1972	27.0	28.2	13.9	—
1973	27.8	29.0	14.6	—
1974	30.7	32.0	16.0	13.8
1975	32.2	33.2	19.4	13.5
1976	33.8	35.0	18.9	14.7
1977	35.9	37.3	21.1	15.3
1978	36.8	38.1	24.1	16.9
1979	37.3	38.7	23.7	17.1
1980	37.6	38.9	24.9	17.8
1981	36.8	37.8	25.5	17.8
1982	37.4	38.4	27.3	18.7

Indicator 2:1

Table 2:1-1 Years of college completed by population 25-34 years old, by race and ethnicity: 1970-1988—Continued

Year (March)	All	White	Black	Hispanic *
Percent who completed 2 or more years—Continued				
1983	38.4	39.5	25.3	19.4
1984	37.7	39.1	24.7	19.7
1985	37.8	38.7	28.0	19.5
1986	38.0	38.9	28.5	19.5
1987	37.8	38.7	26.6	21.2
1988	37.4	38.1	26.9	22.5
Percent who completed 4 or more years				
1970	15.8	16.6	6.1	—
1971	16.3	17.2	6.3	—
1972	17.9	18.8	7.9	—
1973	18.2	19.0	8.3	—
1974	20.0	21.0	8.1	5.7
1975	21.4	22.2	10.7	7.0
1976	22.6	23.5	11.3	7.4
1977	23.8	25.0	11.4	6.9
1978	23.6	24.8	11.4	8.8
1979	23.8	24.9	12.8	7.8
1980	24.1	25.4	12.4	8.9
1981	23.2	24.3	11.7	8.8
1982	23.8	24.9	12.6	9.7
1983	24.4	25.5	13.6	10.2
1984	24.3	25.5	13.1	10.1
1985	23.8	24.8	13.7	10.5
1986	24.0	25.1	13.6	9.9
1987	23.9	25.1	12.3	9.8
1988	23.7	24.5	13.1	11.9

—Not available.

* Hispanics may be of any race.

SOURCE: U.S. Department of Commerce, Bureau of the Census, "Educational Attainment in the United States," various years, *Current Population Reports*, Series P-20; and unpublished tabulations from the March supplement to the Current Population Survey.

Table 2:2–1 Number of degrees conferred at institutions of higher education, by level of degree: Academic years ending 1971–1986

Year	Total	Associate degrees	Bachelor's degrees	Master's degrees	Doctor's degrees	First-professional degrees *
1971	1,392,902	252,610	839,730	230,509	32,107	37,946
1972	1,507,799	292,119	887,273	251,633	33,363	43,411
1973	1,586,702	316,174	922,362	263,371	34,777	50,018
1974	1,654,365	343,924	945,776	277,033	33,816	53,816
1975	1,665,553	360,171	922,933	292,450	34,083	55,916
1976	1,725,684	391,454	925,746	311,771	34,064	62,649
1977	1,740,681	406,377	919,549	317,164	33,232	64,359
1978	1,743,782	412,246	921,204	311,620	32,131	66,581
1979	1,726,749	402,702	921,390	301,079	32,730	68,848
1980	1,731,154	400,910	929,417	298,081	32,615	70,131
1981	1,752,170	416,377	935,140	295,739	32,958	71,956
1982	1,787,798	434,515	952,998	295,546	32,707	72,032
1983	1,821,783	456,441	969,510	289,921	32,775	73,136
1984	1,818,604	452,416	974,309	284,263	33,209	74,407
1985	1,828,446	454,712	979,477	286,251	32,943	75,063
1986	1,830,000	446,047	987,823	288,567	33,653	73,910

* The National Center for Education Statistics recognizes 10 first-professional degree fields: chiropractic, dentistry, law, medicine, optometry, osteopathy, pharmacy, podiatry, theology, and veterinary medicine.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1988* (based on the HEGIS survey Degrees and Other Formal Awards Conferred, various years).

Indicator 2:2

Table 2:2–2 Percent change in the number of degrees conferred at institutions of higher education since 1971, by level of degree: Academic years ending 1972–1986

Year	Total	Associate degrees	Bachelor's degrees	Master's degrees	Doctor's degrees	First-professional degrees *
1972	8.2	15.6	5.7	9.2	3.9	14.4
1973	13.9	25.2	9.8	14.3	8.3	31.8
1974	18.8	36.1	12.6	20.2	5.3	41.8
1975	19.6	42.6	9.9	26.9	6.2	47.4
1976	23.9	55.0	10.2	35.3	6.1	65.1
1977	25.0	60.9	9.5	37.6	3.5	69.6
1978	25.2	63.2	9.7	35.2	0.1	75.5
1979	24.0	59.4	9.7	30.6	1.9	81.4
1980	24.3	58.7	10.7	29.3	1.6	84.8
1981	25.8	64.8	11.4	28.3	2.7	89.6
1982	28.4	72.0	13.5	28.2	1.9	89.8
1983	30.8	80.7	15.5	25.8	2.1	92.7
1984	30.6	79.1	16.0	23.3	3.4	96.1
1985	31.3	80.0	16.6	24.2	2.6	97.8
1986	31.4	76.6	17.6	25.2	4.8	94.8

* The National Center for Education Statistics recognizes 10 first-professional degree fields: chiropractic, dentistry, law, medicine, optometry, osteopathy, pharmacy, podiatry, theology, and veterinary medicine.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1988* (based on the HEGIS survey Degrees and Other Formal Awards Conferred, various years).

Indicator 2:3

Table 2:3–1 Number of bachelor's degrees conferred, by field of study: Selected academic years ending 1971–1986

Field of study	1971	1973	1975	1977	1979
Total	839,730	922,362	922,933	919,549	921,390
Humanities and social/behavioral sciences	336,627	356,877	338,642	310,467	288,332
Humanities	143,511	153,260	152,489	146,215	137,949
Social and behavioral sciences	193,116	203,617	186,153	164,252	150,383
Natural and computer sciences and engineering	134,390	141,565	142,585	145,988	154,953
Natural sciences	81,956	85,996	90,700	90,298	83,859
Life sciences	35,743	42,233	51,741	53,605	48,846
Physical sciences	21,412	20,696	20,778	22,497	23,207
Mathematics	24,801	23,067	18,181	14,196	11,806
Computer sciences and engineering	52,434	55,569	51,885	55,690	71,094
Computer and information sciences	2,388	4,304	5,033	6,407	8,719
Engineering	50,046	51,265	46,852	49,283	62,375
Technical/professional *	368,713	423,920	441,706	463,094	478,105
Education	176,614	194,229	167,015	143,722	126,109
Business and other technical/professional *	192,099	229,691	274,691	319,372	351,996
Business and management	114,865	126,263	133,010	150,964	171,764
Other technical/professional *	77,234	103,428	141,681	168,408	180,232

Field of study	1981	1983	1985	1986
Total	935,140	969,510	979,477	987,823
Humanities and social/behavioral sciences	275,179	268,662	263,477	266,558
Humanities	134,001	133,210	132,205	132,334
Social and behavioral sciences	141,178	135,452	131,272	134,224
Natural and computer sciences and engineering	168,367	189,620	212,306	214,403
Natural sciences	78,246	75,840	77,323	76,561
Life sciences	43,216	39,982	38,445	38,524
Physical sciences	23,952	23,405	23,732	21,731
Mathematics	11,078	12,453	15,146	16,306
Computer sciences and engineering	90,121	113,780	134,983	137,842
Computer and information sciences	15,121	24,510	38,878	41,889
Engineering	75,000	89,270	96,105	95,953
Technical/professional *	491,594	511,228	503,694	506,862
Education	108,309	97,991	88,161	87,221
Business and other technical/professional *	383,285	413,237	415,533	419,641
Business and management	199,338	226,893	233,351	238,160
Other technical/professional *	183,947	186,344	182,182	181,481

* In contrast to previous editions of *The Condition of Education*, computer sciences and engineering are not included in the technical/professional category.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1988* (based on the HEGIS survey Degrees and Other Formal Awards Conferred, various years).

Table 2:3-2 Percent change in number of bachelor's degrees conferred since 1971, by field of study: Selected academic years ending 1973-1986

Field of study	1973	1975	1977	1979	1981	1983	1985	1986
Total	9.8	9.9	9.5	9.7	11.4	15.5	16.6	17.6
Humanities and social/behavioral sciences	6.0	0.6	-7.8	-14.3	-18.3	-20.2	-21.7	-20.8
Humanities	6.8	6.3	1.9	-3.9	-6.6	-7.2	-7.9	-7.8
Social and behavioral sciences	5.4	-3.6	-14.9	-22.1	-26.9	-29.9	-32.0	-30.5
Natural and computer sciences and engineering	5.3	6.1	8.6	15.3	25.3	41.1	58.0	59.5
Natural sciences	4.9	10.7	10.2	2.3	-4.5	-7.5	-5.7	-6.6
Life sciences	18.2	44.8	50.0	36.7	20.9	11.9	7.6	7.8
Physical sciences	-3.3	-3.0	5.1	8.4	11.9	9.3	10.8	1.5
Mathematics	-7.0	-26.7	-42.8	-52.4	-55.3	-49.8	-38.9	-34.3
Computer sciences and engineering	6.0	-1.0	6.2	35.6	71.9	117.0	157.4	162.9
Computer and information sciences	80.2	110.8	168.3	265.1	533.2	926.4	1,528.1	1,654.1
Engineering	2.4	-6.4	-1.5	24.6	49.9	78.4	92.0	91.7
Technical/professional *	15.0	19.8	25.6	29.7	33.3	38.7	36.6	37.5
Education	10.0	-5.4	-18.6	-28.6	-38.7	-44.5	-50.1	-50.6
Business and other technical/professional *	19.6	43.0	66.3	83.2	99.5	115.1	116.3	118.5
Business and management	9.9	15.8	31.4	49.5	73.5	97.5	103.2	107.3
Other technical/professional *	33.9	83.4	118.0	133.4	138.2	141.3	135.9	135.0

* In contrast to previous editions of *The Condition of Education*, computer sciences and engineering are not included in the technical/professional category.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1988* (based on the HEGIS survey Degrees and Other Formal Awards Conferred, various years).

Indicator 2:3

Table 2:3-3 Percentage distribution of bachelor's degrees conferred, by field of study: Selected academic years ending 1971-1986

Field of study	1971	1973	1975	1977	1979
Total percent	100.0	100.0	100.0	100.0	100.0
Humanities and social/behavioral sciences	40.1	38.7	36.7	33.8	31.3
Humanities	17.1	16.6	16.5	15.9	15.0
Social and behavioral sciences	23.0	22.1	20.2	17.9	16.3
Natural and computer sciences and engineering	16.0	15.3	15.4	15.9	16.8
Natural sciences	9.8	9.3	9.8	9.8	9.1
Life sciences	4.3	4.6	5.6	5.8	5.3
Physical sciences	2.5	2.2	2.3	2.4	2.5
Mathematics	3.0	2.5	2.0	1.5	1.3
Computer sciences and engineering	6.2	6.0	5.6	6.1	7.7
Computer and information sciences	0.3	0.5	0.5	0.7	0.9
Engineering	6.0	5.6	5.1	5.4	6.8
Technical/professional *	43.9	46.0	47.9	50.4	51.9
Education	21.0	21.1	18.1	15.6	13.7
Business and other technical/professional *	22.9	24.9	29.8	34.7	38.2
Business and management	13.7	13.7	14.4	16.4	18.6
Other technical/professional *	9.2	11.2	15.4	18.3	19.6

Field of study	1981	1983	1985	1986
Total percent	100.0	100.0	100.0	100.0
Humanities and social/behavioral sciences	29.4	27.7	26.9	27.0
Humanities	14.3	13.7	13.5	13.4
Social and behavioral sciences	15.1	14.0	13.4	13.6
Natural and computer sciences and engineering	18.0	19.6	21.7	21.7
Natural sciences	8.4	7.8	7.9	7.8
Life sciences	4.6	4.1	3.9	3.9
Physical sciences	2.6	2.4	2.4	2.2
Mathematics	1.2	1.3	1.5	1.7
Computer sciences and engineering	9.6	11.7	13.8	14.0
Computer and information sciences	1.6	2.5	4.0	4.2
Engineering	8.0	9.2	9.8	9.7
Technical/professional *	52.6	52.7	51.4	51.3
Education	11.6	10.1	9.0	8.8
Business and other technical/professional *	41.0	42.6	42.4	42.5
Business and management	21.3	23.4	23.8	24.1
Other technical/professional *	19.7	19.2	18.6	18.4

* In contrast to previous editions of *The Condition of Education*, computer sciences and engineering are not included in the technical/professional category.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1988* (based on the HEGIS survey Degrees and Other Formal Awards Conferred, various years).

Indicator 2:4

Table 2:4–1 Number of master's degrees conferred, by field of study: Selected academic years ending 1971–1986

Field of study	1971	1973	1975	1977	1979	1981	1983	1985	1986
Total	230,509	263,371	292,450	317,164	301,079	295,739	289,921	286,251	288,567
Humanities and social/behavioral sciences	50,259	53,065	55,559	54,655	49,189	47,873	46,276	45,922	45,964
Humanities	29,352	29,946	31,601	30,959	28,379	28,020	26,786	27,134	27,243
Social and behavioral sciences	20,907	23,119	23,958	23,696	20,810	19,853	19,490	18,788	18,721
Natural and computer sciences and engineering	35,317	36,280	34,331	35,183	33,868	34,756	38,494	42,395	43,805
Natural sciences	17,286	17,548	16,684	16,140	15,318	13,829	13,823	13,737	14,074
Life sciences	5,728	6,263	6,550	7,114	6,831	5,978	5,696	5,059	5,013
Physical sciences	6,367	6,257	5,807	5,331	5,451	5,284	5,290	5,796	5,902
Mathematics	5,191	5,028	4,327	3,695	3,036	2,567	2,837	2,882	3,159
Computer sciences and engineering	18,031	18,732	17,647	19,043	18,550	20,927	24,671	28,658	29,731
Computer and information sciences	1,588	2,113	2,299	2,798	3,055	4,218	5,321	7,101	8,070
Engineering	16,443	16,619	15,348	16,245	15,495	16,709	19,350	21,557	21,661
Technical/professional *	144,933	174,026	202,560	227,326	218,022	213,110	205,151	197,934	198,798
Education	88,952	105,565	120,169	126,825	111,995	98,938	84,853	76,137	76,353
Business and other technical/professional *	55,981	68,461	82,391	100,501	106,027	114,172	120,298	121,797	122,445
Business and management	26,481	31,007	36,247	46,420	50,372	57,898	65,319	67,527	67,137
Other technical/professional *	29,500	37,454	46,144	54,081	55,655	56,274	54,979	54,270	55,308

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* In contrast to previous editions of *The Condition of Education*, computer sciences and engineering are not included in the technical/professional category.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1988* (based on the HEGIS survey Degrees and Other Formal Awards Conferred, various years).

Indicator 2:4

Table 2:4–2 Percent change in number of master's degrees conferred since 1971, by field of study: Selected academic years ending 1973–1986

Field of study	1973	1975	1977	1979	1981	1983	1985	1986
Total	14.3	26.9	37.6	30.6	28.3	25.8	24.2	25.2
Humanities and social/behavioral sciences	5.6	10.5	8.7	-2.1	-4.7	-7.9	-8.6	-8.5
Humanities	2.0	7.7	5.5	-3.3	-4.5	-8.7	-7.6	-7.2
Social and behavioral sciences	10.6	14.6	13.3	-0.5	-5.0	-6.8	-10.1	-10.5
Natural and computer sciences and engineering	2.7	-2.8	-0.4	-4.1	-1.6	9.0	20.0	24.0
Natural sciences	1.5	-3.5	-6.6	-11.4	-20.0	-20.0	-20.5	-18.6
Life sciences	9.3	14.4	24.2	19.3	4.4	-0.6	-11.7	-12.5
Physical sciences	-1.7	-8.8	-16.3	-14.4	-17.0	-16.9	-9.0	-7.3
Mathematics	-3.1	-16.6	-28.8	-41.5	-50.5	-45.3	-44.5	-39.1
Computer sciences and engineering	3.9	-2.1	5.6	2.9	16.1	36.8	58.9	64.9
Computer and information sciences	33.1	44.8	76.2	92.4	165.6	235.1	347.2	408.2
Engineering	1.1	-6.7	-1.2	-5.8	1.6	17.7	31.1	31.7
Technical/professional *	20.1	39.8	56.8	50.4	47.0	41.5	36.6	37.2
Education	18.7	35.1	42.6	25.9	11.2	-4.6	-14.4	-14.2
Business and other technical/professional *	22.3	47.2	79.5	89.4	103.9	114.9	117.6	118.7
Business and management	17.1	36.9	75.3	90.2	118.6	146.7	155.0	153.5
Other technical/professional *	27.0	56.4	83.3	88.7	90.8	86.4	84.0	87.5

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* In contrast to previous editions of *The Condition of Education*, computer sciences and engineering are not included in the technical/professional category.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1988* (based on the HEGIS survey Degrees and Other Formal Awards Conferred, various years).

Indicator 2:4

Table 2:4–3 Percentage distribution of master's degrees conferred, by field of study: Selected academic years ending 1971–1986

Field of study	1971	1973	1975	1977	1979
Total percent	100.0	100.0	100.0	100.0	100.0
Humanities and social/behavioral sciences	21.8	20.1	19.0	17.2	16.3
Humanities	12.7	11.4	10.8	9.8	9.4
Social and behavioral sciences	9.1	8.8	8.2	7.5	6.9
Natural and computer sciences and engineering	15.3	13.8	11.7	11.1	11.2
Natural sciences	7.5	6.7	5.7	5.1	5.1
Life sciences	2.5	2.4	2.2	2.2	2.3
Physical sciences	2.8	2.4	2.0	1.7	1.8
Mathematics	2.3	1.9	1.5	1.2	1.0
Computer sciences and engineering	7.8	7.1	6.0	6.0	6.2
Computer and information sciences	0.7	0.8	0.8	0.9	1.0
Engineering	7.1	6.3	5.2	5.1	5.1
Technical/professional *	62.9	66.1	69.3	71.1	72.4
Education	38.6	40.1	41.1	40.0	37.2
Business and other technical/professional *	24.3	26.0	28.2	31.7	35.2
Business and management	11.5	11.8	12.4	14.6	16.7
Other technical/professional *	12.8	14.2	15.8	17.1	18.5

Field of study	1981	1983	1985	1986
Total percent	100.0	100.0	100.0	100.0
Humanities and social/behavioral sciences	16.2	16.0	16.0	15.9
Humanities	9.5	9.2	9.5	9.4
Social and behavioral sciences	6.7	6.7	6.6	6.5
Natural and computer sciences and engineering	11.8	13.3	14.8	15.2
Natural sciences	4.7	4.8	4.8	4.9
Life sciences	2.0	2.0	1.8	1.7
Physical sciences	1.8	1.8	2.0	2.0
Mathematics	0.9	1.0	1.0	1.1
Computer sciences and engineering	7.1	8.5	10.0	10.3
Computer and information sciences	1.4	1.8	2.5	2.8
Engineering	5.6	6.7	7.5	7.5
Technical/professional *	72.1	70.8	69.1	68.9
Education	33.5	29.3	26.6	26.5
Business and other technical/professional *	38.6	41.5	42.5	42.4
Business and management	19.6	22.5	23.6	23.3
Other technical/professional *	19.0	19.0	19.0	19.2

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* In contrast to previous editions of *The Condition of Education*, computer sciences and engineering are not included in the technical/professional category.

NOTE: Detail may not add to totals due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1988* (based on the HEGIS survey Degrees and Other Formal Awards Conferred, various years).

Indicator 2:4

Table 2:4–4 Number of doctor's degrees conferred, by field of study: Selected academic years ending 1971–1986

Field of study	1971	1973	1975	1977	1979
Total	32,107	34,777	34,083	33,232	32,730
Humanities and social/behavioral sciences	9,801	11,704	11,959	11,732	11,356
Humanities	4,360	5,385	5,308	5,187	5,336
Social and behavioral sciences	5,441	6,319	6,651	6,545	6,020
Natural and computer sciences and engineering	13,000	12,398	11,306	10,363	10,116
Natural sciences	9,234	8,710	7,985	7,561	7,374
Life sciences	3,645	3,636	3,384	3,397	3,542
Physical sciences	4,390	4,006	3,626	3,341	3,102
Mathematics	1,199	1,068	975	823	730
Computer sciences and engineering	3,766	3,688	3,321	2,802	2,742
Computer and information sciences	128	196	213	216	236
Engineering	3,638	3,492	3,108	2,586	2,506
Technical/professional *	9,306	10,675	10,818	11,137	11,258
Education	6,403	7,318	7,446	7,963	7,736
Business and other technical/professional*	2,903	3,357	3,372	3,174	3,522
Business and management	807	923	1,009	863	860
Other technical/professional *	2,096	2,434	2,363	2,311	2,662

Field of study	1981	1983	1985	1986
Total	32,958	32,775	32,943	33,653
Humanities and social/behavioral sciences	10,818	10,602	10,211	10,602
Humanities	4,749	4,563	4,452	4,559
Social and behavioral sciences	6,069	6,039	5,759	6,043
Natural and computer sciences and engineering	10,400	10,401	11,012	11,405
Natural sciences	7,587	7,308	7,534	7,651
Life sciences	3,718	3,341	3,432	3,358
Physical sciences	3,141	3,269	3,403	3,551
Mathematics	728	698	699	742
Computer sciences and engineering	2,813	3,093	3,478	3,754
Computer and information sciences	252	262	248	344
Engineering	2,561	2,831	3,230	3,410
Technical/professional *	11,740	11,772	11,720	11,646
Education	7,900	7,551	7,151	7,110
Business and other technical/professional*	3,840	4,221	4,569	4,536
Business and management	842	809	866	969
Other technical/professional *	2,998	3,412	3,703	3,567

* In contrast to previous editions of *The Condition of Education*, computer sciences and engineering are not included in the technical/professional category.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1988* (based on the HEGIS survey Degrees and Other Formal Awards Conferred, various years).

Table 2:4–5 Percent change in number of doctor's degrees conferred since 1971, by field of study: Selected academic years ending 1973–1986

Field of study	1973	1975	1977	1979	1981	1983	1985	1986
Total	8.3	6.2	3.5	1.9	2.7	2.1	2.6	4.8
Humanities and social/behavioral sciences	19.4	22.0	19.7	15.9	10.4	8.2	4.2	8.2
Humanities	23.5	21.7	19.0	22.4	8.9	4.7	2.1	4.6
Social and behavioral sciences	16.1	22.2	20.3	10.6	11.5	11.0	5.8	11.1
Natural and computer sciences and engineering	-4.6	-13.0	-20.3	-22.2	-20.0	-20.0	-15.3	-12.3
Natural sciences	-5.7	-13.5	-18.1	-20.1	-17.8	-20.9	-18.4	-17.1
Life sciences	-0.2	-7.2	-6.8	-2.8	2.0	-8.3	-5.8	-7.9
Physical sciences	-8.7	-17.4	-23.9	-29.3	-28.5	-25.5	-22.5	-19.1
Mathematics	-10.9	-18.7	-31.4	-39.1	-39.3	-41.8	-41.7	-38.1
Computer sciences and engineering	-2.1	-11.8	-25.6	-27.2	-25.3	-17.9	-7.6	-0.3
Computer and information sciences	53.1	66.4	68.8	84.4	96.9	104.7	93.8	168.8
Engineering	-4.0	-14.6	-28.9	-31.1	-29.6	-22.2	-11.2	-6.3
Technical/professional *	14.7	16.2	19.7	21.0	26.2	26.5	25.9	25.1
Education	14.3	16.3	24.4	20.8	23.4	17.9	11.7	11.0
Business and other technical/professional *	15.6	16.2	9.3	21.3	32.3	45.4	57.4	56.3
Business and management	14.4	25.0	6.9	6.6	4.3	0.2	7.3	20.1
Other technical/professional *	16.1	12.7	10.3	27.0	43.0	62.8	76.7	70.2

* In contrast to previous editions of *The Condition of Education*, computer sciences and engineering are not included in the technical/professional category.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1988* (based on the HEGIS survey Degrees and Other Formal Awards Conferred, various years).

Table 2:4–6 Percentage distribution of doctor's degrees conferred, by field of study: Selected academic years ending 1971–1986

Field of study	1971	1973	1975	1977	1979	1981	1983	1985	1986
Total percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Humanities and social/behavioral sciences	30.5	33.7	35.1	35.3	34.7	32.8	32.3	31.0	31.5
Humanities	13.6	15.5	15.6	15.6	16.3	14.4	13.9	13.5	13.5
Social and behavioral sciences	16.9	18.2	19.5	19.7	18.4	18.4	18.4	17.5	18.0
Natural and computer sciences and engineering	40.5	35.6	33.2	31.2	30.9	31.6	31.7	33.4	33.9
Natural sciences	28.8	25.0	23.4	22.8	22.5	23.0	22.3	22.9	22.7
Life sciences	11.4	10.5	9.9	10.2	10.8	11.3	10.2	10.4	10.0
Physical sciences	13.7	11.5	10.6	10.1	9.5	9.5	10.0	10.3	10.6
Mathematics	3.7	3.1	2.9	2.5	2.2	2.2	2.1	2.1	2.2
Computer sciences and engineering	11.7	10.6	9.7	8.4	8.4	8.5	9.4	10.6	11.2
Computer and information sciences	0.4	0.6	0.6	0.6	0.7	0.8	0.8	0.8	1.0
Engineering	11.3	10.0	9.1	7.8	7.7	7.8	8.6	9.8	10.1
Technical/professional *	29.0	30.7	31.7	33.5	34.4	35.6	35.9	35.6	34.6
Education	19.9	21.0	21.8	24.0	23.6	24.0	23.0	21.7	21.1
Business and other technical/professional *	9.0	9.7	9.9	9.6	10.8	11.7	12.9	13.9	13.5
Business and management	2.5	2.7	3.0	2.6	2.6	2.6	2.5	2.6	2.9
Other technical/professional *	6.5	7.0	6.9	7.0	8.1	9.1	10.4	11.2	10.6

* In contrast to previous editions of *The Condition of Education*, computer sciences and engineering are not included in the technical/professional category.

NOTE: Detail may not add to totals due to rounding.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1988* (based on the HEGIS survey Degrees and Other Formal Awards Conferred, various years).

Indicator 2:5

Table 2:5–1 Number of degrees conferred, by race and ethnicity and degree level: Selected academic years ending 1977–1985

Race and ethnicity	1977	1979	1981	1985
		Bachelor's degrees		
Total	915,131	916,347	934,800	968,311
White, non-Hispanic	805,186	799,617	807,319	826,106
Black, non-Hispanic	58,515	60,130	60,673	57,473
Hispanic	18,663	20,029	21,832	25,874
Asian or Pacific Islander	13,745	15,336	18,794	25,395
American Indian/Alaskan Native	3,319	3,404	3,593	4,246
Nonresident alien	15,703	17,831	22,589	29,217
		Master's degrees		
Total	315,660	299,887	294,183	280,421
White, non-Hispanic	265,147	249,051	241,216	223,628
Black, non-Hispanic	21,024	19,393	17,133	13,939
Hispanic	6,069	5,544	6,461	6,864
Asian or Pacific Islander	5,115	5,495	6,282	7,782
American Indian/Alaskan Native	967	999	1,034	1,256
Nonresident alien	17,338	19,405	22,057	26,952

Table 2:5-1 Number of degrees conferred, by race and ethnicity and degree level: Selected academic years ending 1977-1985—Continued

Race and ethnicity	1977	1979	1981	1985
	Doctor's degrees			
Total	33,111	32,664	32,839	32,307
White, non-Hispanic	26,836	26,128	25,908	23,934
Black, non-Hispanic	1,253	1,267	1,265	1,154
Hispanic	522	439	456	677
Asian or Pacific Islander	658	811	877	1,106
American Indian/Alaskan Native	95	104	130	119
Nonresident alien	3,747	3,915	4,203	5,317
	First-professional degrees *			
Total	63,953	68,611	71,340	71,057
White, non-Hispanic	58,422	62,430	64,551	63,219
Black, non-Hispanic	2,537	2,836	2,931	3,029
Hispanic	1,076	1,283	1,541	1,884
Asian or Pacific Islander	1,021	1,205	1,456	1,816
American Indian/Alaskan Native	196	216	192	248
Nonresident alien	701	641	669	861

* The National Center for Education Statistics recognizes 10 first-professional degree fields: chiropractic, dentistry, law, medicine, optometry, osteopathy, pharmacy, podiatry, theology, and veterinary medicine.

NOTE: Data for academic year ending 1983 were not fully edited and thus are not available for publication. The total number of degrees reported in this table is lower than the total actually conferred because of missing racial/ethnic data. The numbers reported for 1977 and 1979 do not include degrees conferred by U.S. Service Schools (0.4 percent or less of total degrees).

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics*, various years (based on the HEGIS survey Degrees and Other Formal Awards Conferred).

Table 2:5–2 Percent change in number of degrees conferred between academic years ending 1977 and 1985, by race and ethnicity, degree level, and gender

Race and ethnicity	Total	Men	Women	Total	Men	Women
	Bachelor's degrees			Master's degrees		
Total [1]	6.5	-2.6	17.2	-9.7	-14.5	-4.4
White, non-Hispanic	2.6	-7.0	13.9	-15.7	-23.3	-7.3
Black, non-Hispanic	-1.8	-8.0	2.9	-33.7	-33.1	-34.1
Hispanic	38.6	21.1	59.9	13.1	-6.3	35.7
Asian or Pacific Islander	84.8	78.6	92.4	52.1	55.4	47.1
American Indian/Alaskan Native	27.9	11.2	47.7	29.9	11.9	50.9
	Doctor's degrees			First-professional degrees [2]		
Total [1]	-0.9	-13.7	39.0	16.6	-3.7	105.3
White, non-Hispanic	-10.8	-25.0	30.8	8.2	-10.8	93.4
Black, non-Hispanic	-7.9	-26.8	21.8	19.4	-7.8	81.2
Hispanic	29.7	12.5	77.0	75.1	38.7	252.5
Asian or Pacific Islander	68.1	48.5	157.6	77.9	48.5	171.0
American Indian/Alaskan Native	25.3	-4.5	96.4	26.5	10.7	94.6

[1] Includes degrees conferred to nonresident aliens and to those of unknown race/ethnicity.

[2] See table 2:5–1 for definition.

NOTE: Data for 1977 exclude degrees conferred by U.S. Service Schools (0.4 percent or less of degrees conferred).

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics*, various years (based on the HEGIS survey Degrees and Other Formal Awards Conferred).

Table 2:5–3 Number of degrees conferred, by race and ethnicity, degree level, and gender: Academic years ending 1977 and 1985

Race and ethnicity and degree level	Men		Women	
	1977	1985	1977	1985
Bachelor's degrees				
White, non-Hispanic	435,659	405,065	369,527	421,021
Black, non-Hispanic	25,026	23,018	33,489	34,455
Hispanic	10,238	12,402	8,425	13,472
Asian or Pacific Islander	7,590	13,554	6,155	11,841
American Indian/Alaskan Native	1,797	1,998	1,522	2,248
Master's degrees				
White, non-Hispanic	138,303	106,059	126,844	117,569
Black, non-Hispanic	7,769	5,200	13,255	8,739
Hispanic	3,266	3,059	2,803	3,805
Asian or Pacific Islander	3,116	4,842	1,999	2,940
American Indian/Alaskan Native	521	583	446	673
Doctor's degrees				
White, non-Hispanic	20,017	15,017	6,819	8,917
Black, non-Hispanic	766	561	487	593
Hispanic	383	431	139	246
Asian or Pacific Islander	540	802	118	304
American Indian/Alaskan Native	67	64	28	55
First-professional degrees *				
White, non-Hispanic	47,777	42,630	10,645	20,589
Black, non-Hispanic	1,761	1,623	776	1,406
Hispanic	893	1,239	183	645
Asian or Pacific Islander	776	1,152	245	664
American Indian/Alaskan Native	159	176	37	72

* See table 2:5–1 for definition.

NOTE: Data for nonresident aliens are not shown. Data for 1977 exclude degrees conferred by U.S. Service Schools (0.4 percent or less of degrees conferred).

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics*, various years (based on the HEGIS survey Degrees and Other Formal Awards Conferred).

Indicator 2:6

Table 2:6-1 Percentage distribution of bachelor's degrees, by field and race and ethnicity: Selected academic years ending 1977-1985

Field of study	1977	1979	1981	1985
		White, non-Hispanic		
Total percent	100.0	100.0	100.0	100.0
Humanities and social/behavioral sciences	33.7	31.2	29.5	27.1
Humanities	16.2	15.0	14.7	13.7
Social and behavioral sciences	17.5	16.1	14.9	13.4
Natural and computer sciences and engineering	15.8	16.6	17.5	20.9
Natural sciences	10.0	9.2	8.4	7.8
Life sciences	5.9	5.3	4.6	3.9
Physical sciences	2.5	2.6	2.6	2.5
Mathematics	1.6	1.3	1.2	1.5
Computer sciences and engineering	5.8	7.4	9.1	13.0
Computer and information sciences	0.7	0.9	1.6	3.8
Engineering	5.1	6.5	7.5	9.3
Technical/professional *	50.5	52.3	52.9	52.0
Education	15.5	13.6	11.6	9.4
Business and other technical/professional *	34.9	38.6	41.3	42.6
Business and management	16.5	18.9	21.6	23.8
Other technical/professional *	18.5	19.8	19.8	18.8
		Black, non-Hispanic		
Total percent	100.0	100.0	100.0	100.0
Humanities and social/behavioral sciences	34.4	32.0	29.7	26.6
Humanities	11.2	11.7	10.9	11.3
Social and behavioral sciences	23.1	20.3	18.9	15.3
Natural and computer sciences and engineering	9.4	10.1	11.5	15.6
Natural sciences	6.5	6.4	6.2	6.3
Life sciences	4.1	4.1	3.7	3.6
Physical sciences	1.1	1.1	1.5	1.4
Mathematics	1.2	1.1	1.0	1.3
Computer sciences and engineering	3.0	3.8	5.3	9.2
Computer and information sciences	0.6	0.8	1.3	3.7
Engineering	2.3	2.9	4.0	5.5
Technical/professional *	56.2	57.8	58.7	57.9
Education	22.1	19.1	15.6	9.5
Business and other technical/professional *	34.1	38.7	43.1	48.4
Business and management	17.0	19.0	22.1	26.1
Other technical/professional *	17.1	19.7	21.0	22.3

Table 2:6-1 Percentage distribution of bachelor's degrees, by field and race and ethnicity: Selected academic years ending 1977-1985—Continued

Field of study	1977	1979	1981	1985
		Hispanic		
Total percent	100.0	100.0	100.0	100.0
Humanities and social/behavioral sciences	41.6	37.9	35.5	31.1
Humanities	19.0	17.3	16.3	15.0
Social and behavioral sciences	22.6	20.6	19.2	16.1
Natural and computer sciences and engineering	13.5	14.5	15.9	19.3
Natural sciences	8.2	8.2	7.9	7.4
Life sciences	5.3	5.5	5.2	4.8
Physical sciences	1.8	1.7	1.9	1.6
Mathematics	1.2	1.0	0.8	1.0
Computer sciences and engineering	5.3	6.4	7.9	11.9
Computer and information sciences	0.5	0.8	1.4	3.2
Engineering	4.8	5.6	6.6	8.7
Technical/professional *	44.9	47.5	48.6	49.6
Education	16.3	15.1	13.0	9.8
Business and other technical/professional *	28.6	32.4	35.6	39.8
Business and management	13.9	16.0	18.8	22.3
Other technical/professional *	14.7	16.5	16.7	17.5
		American Indian/Alaskan Native		
Total percent	100.0	100.0	100.0	100.0
Humanities and social/behavioral sciences	34.4	33.6	33.7	29.7
Humanities	15.2	13.8	15.1	14.4
Social and behavioral sciences	19.3	19.8	18.6	15.3
Natural and computer sciences and engineering	12.0	12.5	12.1	18.1
Natural sciences	7.5	7.4	6.1	7.5
Life sciences	4.7	4.3	3.8	3.8
Physical sciences	2.0	1.9	1.8	2.3
Mathematics	0.8	1.2	0.5	1.4
Computer sciences and engineering	4.5	5.1	6.0	10.6
Computer and information sciences	0.5	0.3	0.6	3.3
Engineering	4.0	4.8	5.4	7.4
Technical/professional *	53.5	53.9	54.2	52.2
Education	21.3	18.9	15.8	11.4
Business and other technical/professional *	32.2	35.0	38.3	40.8
Business and management	13.0	14.8	17.7	21.7
Other technical/professional *	19.2	20.1	20.6	19.1

Indicator 2:6

Table 2:6–1 Percentage distribution of bachelor's degrees, by field and race and ethnicity: Selected academic years ending 1977–1985—Continued

Field of study	1977	1979	1981	1985
		Asian or Pacific Islander		
Total percent	100.0	100.0	100.0	100.0
Humanities and social/behavioral sciences	32.3	28.7	25.6	22.1
Humanities	14.5	13.2	12.4	10.8
Social and behavioral sciences	17.8	15.4	13.2	11.3
Natural and computer sciences and engineering	24.4	28.1	33.0	41.9
Natural sciences	14.5	14.4	13.2	14.1
Life sciences	9.6	9.5	7.9	7.7
Physical sciences	2.7	2.8	3.2	3.0
Mathematics	2.3	2.1	2.1	3.5
Computer sciences and engineering	9.9	13.7	19.9	27.8
Computer and information sciences	1.2	1.7	3.6	8.0
Engineering	8.7	12.0	16.3	19.7
Technical/professional *	43.3	43.3	41.4	35.9
Education	6.5	5.1	3.8	3.0
Business and other technical/professional *	36.7	38.1	37.5	32.9
Business and management	18.9	20.4	21.0	20.8
Other technical/professional *	17.9	17.7	16.5	12.1
		Nonresident alien		
Total percent	100.0	100.0	100.0	100.0
Humanities and social/behavioral sciences	24.6	23.6	20.4	18.6
Humanities	11.5	11.4	9.5	9.1
Social and behavioral sciences	13.1	12.2	10.9	9.6
Natural and computer sciences and engineering	36.6	39.7	43.5	41.0
Natural sciences	12.2	10.9	9.2	8.4
Life sciences	6.5	5.0	4.0	3.1
Physical sciences	3.6	3.9	3.2	2.7
Mathematics	2.0	2.0	2.0	2.6
Computer sciences and engineering	24.4	28.8	34.3	32.6
Computer and information sciences	1.7	2.1	3.4	7.2
Engineering	22.7	26.7	30.8	25.3
Technical/professional *	38.8	36.7	36.1	40.4
Education	4.7	4.9	4.0	3.5
Business and other technical/professional *	34.1	31.8	32.1	36.9
Business and management	21.1	19.6	20.2	25.4
Other technical/professional *	13.0	12.2	11.8	11.5

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* In contrast to previous editions of *The Condition of Education*, computer sciences and engineering are not included in the technical/professional category.

NOTE: Distributions for 1977 through 1981 exclude degrees not reported by race and ethnicity. Distributions for 1985 include degrees for which missing race and ethnicity could be imputed. The number of degrees reported for 1977 and 1979 excludes degrees conferred by U.S. Service Schools (0.4 percent or less of degrees). Detail may not add to totals due to rounding.

SOURCE: U.S. Department of Education, Office for Civil Rights, Survey of Earned Degrees Conferred by Institutions of Higher Education by Race, Ethnicity, and Sex, academic years ending 1977 and 1979; National Center for Education Statistics, Degrees and Other Formal Awards Conferred surveys, academic years ending 1981 and 1985.

Table 2:6–2 Percentage distribution of master's degrees, by field and race and ethnicity: Selected academic years ending 1977–1985

Field of study	1977	1979	1981	1985
		White, non-Hispanic		
Total percent	100.0	100.0	100.0	100.0
Humanities and social/behavioral sciences	17.6	17.0	16.7	15.9
Humanities	10.2	10.1	10.0	9.4
Social and behavioral sciences	7.4	6.9	6.7	6.5
Natural and computer sciences and engineering	10.1	10.0	10.0	12.1
Natural sciences	5.1	5.1	4.6	4.5
Life sciences	2.3	2.4	2.2	1.8
Physical sciences	1.6	1.8	1.7	1.9
Mathematics	1.1	0.9	0.8	0.8
Computer sciences and engineering	5.0	4.9	5.4	7.6
Computer and information sciences	0.8	0.9	1.2	1.9
Engineering	4.2	4.0	4.2	5.6
Technical/professional *	72.3	73.1	73.3	72.0
Education	40.4	37.7	34.3	28.3
Business and other technical/professional *	31.9	35.3	39.0	43.7
Business and management	14.8	16.7	19.7	24.4
Other technical/professional *	17.2	18.6	19.3	19.2
		Black, non-Hispanc		
Total percent	100.0	100.0	100.0	100.0
Humanities and social/behavioral sciences	12.1	10.9	11.1	11.0
Humanities	5.0	4.6	5.0	4.9
Social and behavioral sciences	7.0	6.3	6.1	6.1
Natural and computer sciences and engineering	3.5	3.5	3.9	6.0
Natural sciences	2.1	1.9	2.0	2.1
Life sciences	1.0	1.1	1.0	1.1
Physical sciences	0.4	0.4	0.6	0.6
Mathematics	0.6	0.4	0.4	0.4
Computer sciences and engineering	1.4	1.6	1.9	3.9
Computer and information sciences	0.3	0.3	0.4	1.3
Engineering	1.1	1.2	1.5	2.6
Technical/professional *	84.4	85.5	84.9	83.0
Education	60.4	55.8	50.5	41.7
Business and other technical/professional *	24.1	29.7	34.6	41.3
Business and management	7.7	11.0	13.8	18.7
Other technical/professional *	16.3	18.7	20.7	22.7

Table 2:6-2 Percentage distribution of master's degrees, by field and race and ethnicity: Selected academic years ending 1977-1985—Continued

Field of study	1977	1979	1981	1985
		Hispanic		
Total percent	100.0	100.0	100.0	100.0
Humanities and social/behavioral sciences	22.5	18.4	16.5	17.4
Humanities	11.8	10.7	9.4	9.5
Social and behavioral sciences	10.7	7.7	7.1	7.9
Natural and computer sciences and engineering	7.6	6.6	7.8	10.2
Natural sciences	2.8	2.6	2.5	3.9
Life sciences	1.2	1.2	1.1	1.6
Physical sciences	0.9	0.9	0.9	1.6
Mathematics	0.7	0.5	0.6	0.7
Computer sciences and engineering	4.8	4.0	5.2	6.3
Computer and information sciences	0.8	0.4	0.9	1.4
Engineering	4.0	3.5	4.3	5.0
Technical/professional *	69.9	75.0	75.7	72.4
Education	43.9	46.1	43.8	36.7
Business and other technical/professional *	25.9	28.9	31.9	35.7
Business and management	9.4	11.0	13.4	17.1
Other technical/professional *	16.5	17.9	18.4	18.6
		American Indian/Alaskan Native		
Total percent	100.0	100.0	100.0	100.0
Humanities and social/behavioral sciences	13.7	14.5	15.0	14.2
Humanities	7.2	8.0	7.6	7.8
Social and behavioral sciences	6.4	6.5	7.4	6.4
Natural and computer sciences and engineering	7.7	9.3	7.4	10.8
Natural sciences	5.0	5.3	3.2	3.7
Life sciences	1.6	1.6	1.5	1.4
Physical sciences	2.2	2.9	1.1	1.7
Mathematics	1.2	0.8	0.7	0.6
Computer sciences and engineering	2.7	4.0	4.2	7.2
Computer and information sciences	0.3	1.6	1.2	3.3
Engineering	2.4	2.4	3.0	3.9
Technical/professional *	78.7	76.2	77.7	75.0
Education	50.1	45.1	43.8	37.3
Business and other technical/professional *	28.6	31.0	33.8	37.7
Business and management	11.0	13.5	15.0	21.6
Other technical/professional *	17.7	17.5	18.9	16.2

Indicator 2:6

Table 2:6-2 Percentage distribution of master's degrees, by field and race and ethnicity: Selected academic years ending 1977-1985—Continued

Field of study	1977	1979	1981	1985
	Asian or Pacific Islander			
Total percent	100.0	100.0	100.0	100.0
Humanities and social/behavioral sciences	17.2	13.4	12.0	12.9
Humanities	10.0	7.5	7.1	7.1
Social and behavioral sciences	7.2	5.8	4.9	5.9
Natural and computer sciences and engineering	24.1	26.7	27.9	35.3
Natural sciences	7.7	8.5	6.3	7.1
Life sciences	3.1	3.7	2.3	2.3
Physical sciences	2.8	2.9	2.4	2.7
Mathematics	1.8	1.9	1.5	2.1
Computer sciences and engineering	16.4	18.2	21.6	28.1
Computer and information sciences	2.1	2.7	4.4	7.9
Engineering	14.3	15.5	17.2	20.2
Technical/professional *	58.7	59.9	60.1	51.8
Education	19.4	17.2	15.5	10.3
Business and other technical/professional *	39.3	42.7	44.6	41.5
Business and management	18.3	22.6	26.0	26.6
Other technical/professional *	21.0	20.2	18.6	14.9
	Nonresident alien			
Total percent	100.0	100.0	100.0	100.0
Humanities and social/behavioral sciences	17.7	15.9	16.9	16.2
Humanities	8.2	7.3	8.5	8.3
Social and behavioral sciences	9.5	8.5	8.5	7.9
Natural and computer sciences and engineering	31.2	31.2	32.1	36.3
Natural sciences	8.7	8.5	7.3	8.4
Life sciences	2.8	2.4	1.7	1.8
Physical sciences	3.8	3.6	3.6	4.1
Mathematics	2.1	2.4	2.1	2.5
Computer sciences and engineering	22.5	22.8	24.8	27.9
Computer and information sciences	2.1	2.4	4.1	6.3
Engineering	20.4	20.4	20.7	21.6
Technical/professional *	51.1	52.9	50.9	47.5
Education	13.8	14.1	12.2	10.8
Business and other technical/professional *	37.3	38.7	38.7	36.7
Business and management	21.8	22.6	22.9	21.6
Other technical/professional *	15.5	16.1	15.8	15.1

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* In contrast to previous editions of *The Condition of Education*, computer sciences and engineering are not included in the technical/professional category.

NOTE: Distributions for 1977 through 1981 exclude degrees not reported by race and ethnicity. Distributions for 1985 include degrees for which missing race and ethnicity could be imputed. The number of degrees reported for 1977 and 1979 excludes degrees conferred by U.S. Service Schools (0.4 percent or less of degrees). Detail may not add to totals due to rounding.

SOURCE: U.S. Department of Education, Office for Civil Rights, Survey of Earned Degrees Conferred by Institutions of Higher Education by Race, Ethnicity, and Sex, academic years ending 1977 and 1979; National Center for Education Statistics, Degrees and Other Formal Awards Conferred surveys, academic years ending 1981 and 1985.

Table 2:6-3 Percentage distribution of doctor's degrees, by field and race and ethnicity: Selected academic years ending 1977–1985

Field of study	1977	1979	1981	1985
	White, non-Hispanic			
Total percent	100.0	100.0	100.0	100.0
Humanities and social/behavioral sciences	37.4	36.9	34.9	33.7
Humanities	16.7	17.5	15.2	14.8
Social and behavioral sciences	20.7	19.4	19.7	18.9
Natural and computer sciences and engineering	29.1	28.7	29.6	29.5
Natural sciences	22.7	22.7	23.7	23.1
Life sciences	10.6	11.4	12.3	11.4
Physical sciences	9.8	9.2	9.4	10.2
Mathematics	2.3	2.0	2.0	1.6
Computer sciences and engineering	6.4	6.0	5.9	6.4
Computer and information sciences	0.6	0.7	0.7	0.6
Engineering	5.8	5.3	5.2	5.8
Technical/professional *	33.5	34.4	35.5	36.8
Education	24.7	24.2	24.7	23.5
Business and other technical/professional *	8.9	10.2	10.8	13.4
Business and management	2.5	2.5	2.4	2.5
Other technical/professional *	6.4	7.7	8.4	10.9
	Black, non-Hispanic			
Total percent	100.0	100.0	100.0	100.0
Humanities and social/behavioral sciences	28.5	31.2	28.5	29.6
Humanities	10.8	12.0	11.5	10.1
Social and behavioral sciences	17.7	19.2	17.1	19.5
Natural and computer sciences and engineering	10.5	10.7	10.3	12.0
Natural sciences	8.5	8.5	8.3	8.2
Life sciences	4.2	3.7	5.1	4.6
Physical sciences	3.6	3.8	2.5	3.0
Mathematics	0.8	1.0	0.7	0.6
Computer sciences and engineering	1.9	2.2	2.0	3.7
Computer and information sciences	0.1	0.3	0.1	0.3
Engineering	1.8	1.9	1.9	3.5
Technical/professional *	61.1	58.1	61.2	58.4
Education	54.7	49.3	48.5	45.1
Business and other technical/professional *	6.4	8.8	12.6	13.3
Business and management	1.0	1.4	2.5	1.2
Other technical/professional *	5.3	7.3	10.1	12.0

Table 2:6–3 Percentage distribution of doctor's degrees, by field and race and ethnicity: Selected academic years ending 1977–1985—Continued

Field of study	1977	1979	1981	1985
	Hispanic			
Total percent	100.0	100.0	100.0	100.0
Humanities and social/behavioral sciences	39.3	44.4	40.6	34.1
Humanities	16.9	21.0	14.9	14.8
Social and behavioral sciences	22.4	23.5	25.7	19.4
Natural and computer sciences and engineering	21.3	18.2	20.2	32.9
Natural sciences	16.5	13.0	15.1	19.5
Life sciences	5.6	6.4	8.8	9.9
Physical sciences	7.5	5.2	5.0	6.4
Mathematics	3.4	1.4	1.3	3.2
Computer sciences and engineering	4.8	5.2	5.0	13.4
Computer and information sciences	0.0	0.2	0.0	0.3
Engineering	4.8	5.0	5.0	13.1
Technical/professional *	39.5	37.4	39.3	32.9
Education	31.4	31.0	30.7	24.1
Business and other technical/professional *	8.0	6.4	8.6	8.9
Business and management	1.3	1.1	0.4	0.6
Other technical/professional *	6.7	5.2	8.1	8.3
	American Indian/Alaskan Native			
Total percent	100.0	100.0	100.0	100.0
Humanities and social/behavioral sciences	28.4	35.6	27.7	22.7
Humanities	11.6	9.6	10.8	10.1
Social and behavioral sciences	16.8	26.0	16.9	12.6
Natural and computer sciences and engineering	28.4	15.4	15.4	20.2
Natural sciences	25.3	13.5	10.8	13.4
Life sciences	15.8	5.8	6.2	3.4
Physical sciences	6.3	7.7	3.1	10.1
Mathematics	3.2	0.0	1.5	0.0
Computer sciences and engineering	3.2	1.9	4.6	6.7
Computer and information sciences	1.1	0.0	0.8	0.8
Engineering	2.1	1.9	3.8	5.9
Technical/professional *	43.2	49.0	56.9	57.1
Education	33.7	41.3	43.8	42.9
Business and other technical/professional *	9.5	7.7	13.1	14.3
Business and management	3.2	2.9	3.8	3.4
Other technical/professional *	6.3	4.8	9.2	10.9

Indicator 2:6

Table 2:6–3 Percentage distribution of doctor's degrees, by field and race and ethnicity: Selected academic years ending 1977–1985—Continued

Field of study	1977	1979	1981	1985
	Asian or Pacific Islander			
Total percent	100.0	100.0	100.0	100.0
Humanities and social/behavioral sciences	22.2	20.3	21.0	20.8
Humanities	7.3	9.5	9.0	10.1
Social and behavioral sciences	14.9	10.9	12.0	10.7
Natural and computer sciences and engineering	53.8	57.7	55.0	56.1
Natural sciences	33.6	34.2	31.6	31.1
Life sciences	15.8	15.7	16.0	11.7
Physical sciences	14.3	14.9	12.1	16.2
Mathematics	3.5	3.6	3.5	3.3
Computer sciences and engineering	20.2	23.6	23.4	25.0
Computer and information sciences	1.4	1.0	1.6	1.3
Engineering	18.8	22.6	21.8	23.8
Technical/professional *	24.0	21.9	24.1	23.1
Education	11.7	12.0	12.0	7.6
Business and other technical/professional *	12.3	10.0	12.1	15.5
Business and management	2.4	1.5	2.9	3.2
Other technical/professional *	9.9	8.5	9.2	12.3
	Nonresident alien			
Total percent	100.0	100.0	100.0	100.0
Humanities and social/behavioral sciences	22.9	22.6	21.3	20.8
Humanities	8.7	9.8	9.1	7.8
Social and behavioral sciences	14.2	12.8	12.2	13.0
Natural and computer sciences and engineering	51.4	48.7	47.6	52.2
Natural sciences	27.6	25.3	23.6	24.6
Life sciences	9.1	8.8	6.9	7.1
Physical sciences	14.2	12.4	12.6	12.8
Mathematics	4.3	4.1	4.1	4.7
Computer sciences and engineering	23.8	23.4	24.0	27.6
Computer and information sciences	1.2	1.2	1.2	1.3
Engineering	22.6	22.1	22.7	26.3
Technical/professional *	25.7	28.7	31.1	27.0
Education	10.2	12.7	14.1	11.2
Business and other technical/professional *	15.6	16.0	17.0	15.8
Business and management	4.3	4.2	3.8	3.8
Other technical/professional *	11.3	11.8	13.2	12.0

* In contrast to previous editions of *The Condition of Education*, computer sciences and engineering are not included in the technical/professional category.

NOTE: Distributions for 1977 through 1981 exclude degrees not reported by race and ethnicity. Distributions for 1985 include degrees for which missing race and ethnicity could be imputed. The number of degrees reported for 1977 and 1979 excludes degrees conferred by U.S. Service Schools (0.4 percent or less of degrees). Detail may not add to totals due to rounding.

SOURCE: U.S. Department of Education, Office for Civil Rights, Survey of Earned Degrees Conferred by Institutions of Higher Education by Race, Ethnicity, and Sex, academic years ending 1977 and 1979; National Center for Education Statistics, Degrees and Other Formal Awards Conferred surveys, academic years ending 1981 and 1985.

Table 2:6–4 Number of bachelor's degrees conferred, by field and race and ethnicity: Selected academic years ending 1977–1985

Field of study	1977	1979	1981	1985
		White, non-Hispanic		
Total degrees	805,186	799,617	807,319	826,106
Humanities and social/behavioral sciences	271,490	249,100	238,522	224,152
Humanities	130,327	120,305	118,286	113,084
Social and behavioral sciences	141,163	128,795	120,236	111,068
Natural and computer sciences and engineering	127,177	132,701	141,380	172,388
Natural sciences	80,313	73,523	67,967	64,629
Life sciences	47,623	42,705	37,276	31,807
Physical sciences	20,189	20,650	21,246	20,660
Mathematics	12,501	10,168	9,445	12,162
Computer sciences and engineering	46,864	59,178	73,413	107,759
Computer and information sciences	5,473	7,384	12,565	31,321
Engineering	41,391	51,794	60 848	76,438
Technical/professional *	406,519	417,816	427,417	429,566
Education	125,148	108,949	93,724	77,531
Business and other technical/professional *	281,371	308,867	333,693	352,035
Business and management	132,814	150,759	174,198	196,915
Other technical/professional *	148,557	158,108	159,495	155,120
		Black, non-Hispanic		
Total degrees	58,515	60,130	60,673	57,473
Humanities and social/behavioral sciences	20,107	19,266	18,045	15,272
Humanities	6,567	7,014	6,608	6,505
Social and behavioral sciences	13,540	12,252	11,437	8,767
Natural and computer sciences and engineering	5,514	6,091	6,994	8,942
Natural sciences	3,785	3,830	3,759	3,640
Life sciences	2,413	2,487	2,269	2,045
Physical sciences	665	691	906	829
Mathematics	707	652	584	766
Computer sciences and engineering	1,729	2,261	3,235	5,302
Computer and information sciences	361	505	786	2,143
Engineering	1,368	1,756	2,449	3,159
Technical/professional *	32,894	34,773	35,634	33.259
Education	12,992	11,509	9,494	5,456
Business and other technical/professional *	19,972	23,264	26,140	27,803
Business and management	9,976	11,430	13,400	14,999
Other technical/professional *	9,996	11,834	12,740	12,804

Table 2:6–4 Number of bachelor's degrees conferred, by field and race and ethnicity: Selected academic years ending 1977–1985—Continued

Field of study	1977	1979	1981	1985
Hispanic				
Total degrees	18,663	20,029	21,832	25,874
Humanities and social/behavioral sciences	7,764	7,594	7,754	8,049
Humanities	3,537	3,469	3,561	3,872
Social and behavioral sciences	4,227	4,125	4,193	4,177
Natural and computer sciences and engineering	2,514	2,914	3,469	4,983
Natural sciences	1,534	1,642	1,734	1,915
Life sciences	981	1,109	1,144	1,241
Physical sciences	332	339	405	417
Mathematics	221	194	185	257
Computer sciences and engineering	980	1,272	1,735	3,068
Computer and information sciences	93	155	302	826
Engineering	887	1,117	1,433	2,242
Technical/professional *	8,385	9,521	10,609	12,842
Education	3,050	3,029	2,847	2,533
Business and other technical/professional *	5,335	6,492	7,762	10,309
Business and management	2,588	3,196	4,114	5,771
Other technical/professional *	2,747	3,296	3,648	4,538
American Indian/Alaskan Native				
Total degrees	3,319	3,404	3,593	4,246
Humanities and social/behavioral sciences	1,143	1,144	1,211	1,260
Humanities	504	470	541	612
Social and behavioral sciences	639	674	670	648
Natural and computer sciences and engineering	399	425	436	770
Natural sciences	250	252	220	318
Life sciences	157	148	137	161
Physical sciences	67	63	65	98
Mathematics	26	41	18	59
Computer sciences and engineering	149	173	216	452
Computer and information sciences	15	11	21	139
Engineering	134	162	195	313
Technical/professional *	1,777	1,835	1,946	2,216
Education	707	645	569	483
Business and other technical/professional *	1,070	1,190	1,377	1,733
Business and management	433	505	636	921
Other technical/professional *	637	685	741	812

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Table 2:6-4 Number of bachelor's degrees conferred, by field and race and ethnicity: Selected academic years ending 1977-1985—Continued

Field of study	1977	1979	1981	1985
		Asian or Pacific Islander		
Total degrees	13,745	15,336	18,794	25,395
Humanities and social/behavioral sciences	4,442	4,400	4,807	5,618
Humanities	1,993	2,032	2,323	2,754
Social and behavioral sciences	2,449	2,368	2,484	2,864
Natural and computer sciences and engineering	3,358	4,303	6,211	10,650
Natural sciences	1,996	2,204	2,476	3,593
Life sciences	1,314	1,458	1,489	1,950
Physical sciences	367	425	596	763
Mathematics	315	321	391	880
Computer sciences and engineering	1,362	2,099	3,735	7,057
Computer and information sciences	163	262	669	2,044
Engineering	1,199	1,837	3,066	5,013
Technical/professional *	5,945	6,633	7,776	9,127
Education	894	785	723	770
Business and other technical/professional *	5,051	5,848	7,053	8,357
Business and management	2,596	3,135	3,943	5,274
Other technical/professional *	2,455	2,713	3,110	3,083
		Nonresident alien		
Total degrees	15,703	17,831	22,589	29,217
Humanities and social/behavioral sciences	3,865	4,208	4,612	5,443
Humanities	1,812	2,027	2,152	2,649
Social and behavioral sciences	2,053	2,181	2,460	2,794
Natural and computer sciences and engineering	5,745	7,080	9,828	11,971
Natural sciences	1,911	1,944	2,088	2,460
Life sciences	1,028	887	901	911
Physical sciences	567	693	732	788
Mathematics	316	364	455	761
Computer sciences and engineering	3,834	5,136	7,740	9,511
Computer and information sciences	265	376	777	2,116
Engineering	3,569	4,760	6,963	7,395
Technical/professional *	6,093	6,543	8,149	11,803
Education	741	869	908	1,015
Business and other technical/professional *	5,352	5,674	7,241	10,788
Business and management	3,316	3,499	4,566	7,428
Other technical/professional *	2,036	2,175	2,675	3,360

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* In contrast to previous editions of *The Condition of Education*, computer sciences and engineering are not included in the technical/professional category.

NOTE: Distributions for 1977 through 1981 exclude degrees not reported by race and ethnicity. Distributions for 1985 include degrees for which missing race and ethnicity could be imputed. The number of degrees reported for 1977 and 1979 excludes degrees conferred by U.S. Service Schools (0.4 percent or less of degrees).

SOURCE: U.S. Department of Education, Office for Civil Rights, Survey of Earned Degrees Conferred by Institutions of Higher Education by Race, Ethnicity, and Sex, academic years ending 1977 and 1979; National Center for Education Statistics, Degrees and Other Formal Awards Conferred surveys, academic years ending 1981 and 1985.

Table 2:6–5 Number of master's degrees conferred, by field and race and ethnicity: Selected academic years ending 1977–1985

Field of study	1977	1979	1981	1985
	White, non-Hispanic			
Total degrees	265,147	249,051	241,216	223,628
Humanities and social/behavioral sciences	46,562	42,278	40,262	35,664
Humanities	27,004	25,087	24,096	21,113
Social and behavioral sciences	19,558	17,191	16,166	14,551
Natural and computer sciences and engineering	26,769	24,823	24,180	27,000
Natural sciences	13,544	12,586	11,215	10,097
Life sciences	6,181	5,861	5,210	4,079
Physical sciences	4,315	4,373	4,115	4,145
Mathematics	3,048	2,352	1,890	1,873
Computer sciences and engineering	13,225	12,237	12,965	16,903
Computer and information sciences	2,136	2,261	2,818	4,303
Engineering	11,089	9,976	10,147	12,600
Technical/professional *	191,816	181,950	176,774	160,964
Education	107,127	93,968	82,779	63,302
Business and other technical/professional *	84,689	87,982	93,995	97,662
Business and management	39,140	41,539	47,474	54,663
Other technical/professional *	45,549	46,443	46,521	42,999
	Black, non-Hispanic			
Total degrees	21,024	19,393	17,133	13,939
Humanities and social/behavioral sciences	2,535	2,123	1,904	1,534
Humanities	1,060	899	865	686
Social and behavioral sciences	1,475	1,224	1,039	848
Natural and computer sciences and engineering	735	680	675	833
Natural sciences	432	374	345	293
Life sciences	206	217	171	151
Physical sciences	93	86	107	89
Mathematics	133	71	67	53
Computer sciences and engineering	303	306	330	540
Computer and information sciences	66	65	70	180
Engineering	237	241	260	360
Technical/professional *	17,754	16,590	14,554	11,572
Education	12,696	10,825	8,645	5,812
Business and other technical/professional *	5,058	5,765	5,909	5,760
Business and management	1,621	2,129	2,359	2,601
Other technical/professional *	3,437	3,636	3,550	3,159

Table 2:6–5 Number of master's degrees conferred, by field and race and ethnicity: Selected academic years ending 1977–1985—Continued

Field of study	1977	1979	1981	1985
		Hispanic		
Total degrees	6,069	5,544	6,461	6,864
Humanities and social/behavioral sciences	1,366	1,021	1,067	1,196
Humanities	717	594	608	651
Social and behavioral sciences	649	427	459	545
Natural and computer sciences and engineering	462	366	502	699
Natural sciences	171	146	164	265
Life sciences	74	68	69	109
Physical sciences	55	52	55	107
Mathematics	42	26	40	49
Computer sciences and engineering	291	220	338	434
Computer and information sciences	46	24	60	94
Engineering	245	196	278	340
Technical/professional *	4,241	4,157	4,892	4,969
Education	2,667	2,555	2,831	2,519
Business and other technical/professional *	1,574	1,602	2,061	2,450
Business and management	572	612	869	1,175
Other technical/professional *	1,002	990	1,192	1,275
		American Indian/Alaskan Native		
Total degrees	967	999	1,034	1,256
Humanities and social/behavioral sciences	132	145	155	178
Humanities	70	80	79	98
Social and behavioral sciences	62	65	76	80
Natural and computer sciences and engineering	74	93	76	136
Natural sciences	48	53	33	46
Life sciences	15	16	15	18
Physical sciences	21	29	11	21
Mathematics	12	8	7	7
Computer sciences and engineering	26	40	43	90
Computer and information sciences	3	16	12	41
Engineering	23	24	31	49
Technical/professional *	761	761	803	942
Education	484	451	453	468
Business and other technical/professional *	277	310	350	474
Business and management	106	135	155	271
Other technical/professional *	171	175	195	203

Table 2:6–5 Number of master's degrees conferred, by field and race and ethnicity: Selected academic years ending 1977–1985—Continued

Field of study	1977	1979	1981	1985
		Asian or Pacific Islander		
Total degrees	5,115	5,495	6,282	7,782
Humanities and social/behavioral sciences	880	735	755	1,006
Humanities	512	414	445	549
Social and behavioral sciences	368	321	310	457
Natural and computer sciences and engineering	1,234	1,468	1,753	2,744
Natural sciences	393	469	395	556
Life sciences	161	205	145	179
Physical sciences	142	160	153	213
Mathematics	90	104	97	164
Computer sciences and engineering	841	999	1,358	2,188
Computer and information sciences	107	149	279	615
Engineering	734	850	1,079	1,573
Technical/professional *	3,001	3,292	3,774	4,032
Education	990	944	973	801
Business and other technical/professional *	2,011	2,348	2,801	3,231
Business and management	937	1,240	1,633	2,070
Other technical/professional *	1,074	1,108	1,168	1,161
		Nonresident alien		
Total degrees	17,338	19,405	22,057	26,952
Humanities and social/behavioral sciences	3,076	3,085	3,737	4,357
Humanities	1,429	1,426	1,872	2,236
Social and behavioral sciences	1,647	1,659	1,865	2,121
Natural and computer sciences and engineering	5,410	6,059	7,085	9,781
Natural sciences	1,503	1,642	1,618	2,259
Life sciences	477	464	368	474
Physical sciences	656	706	786	1,100
Mathematics	370	472	464	685
Computer sciences and engineering	3,907	4,417	5,467	7,522
Computer and information sciences	366	465	904	1,709
Engineering	3,541	3,952	4,563	5,813
Technical/professional *	8,852	10,261	11,235	12,814
Education	2,391	2,744	2,699	2,919
Business and other technical/professional *	6,461	7,517	8,536	9,895
Business and management	3,781	4,388	5,051	5,816
Other technical/professional *	2,680	3,129	3,485	4,079

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* In contrast to previous editions of *The Condition of Education*, computer sciences and engineering are not included in the technical/professional category.

NOTE: Distributions for 1977 through 1981 exclude degrees not reported by race and ethnicity. Distributions for 1985 include degrees for which missing race and ethnicity could be imputed. The number of degrees reported for 1977 and 1979 excludes degrees conferred by U.S. Service Schools (0.4 percent or less of degrees).,

SOURCE: U.S. Department of Education, Office for Civil Rights, Survey of Earned Degrees Conferred by Institutions of Higher Education by Race, Ethnicity, and Sex, academic years ending 1977 and 1979; National Center for Education Statistics, Degrees and Other Formal Awards Conferred surveys, academic years ending 1981 and 1985.

Indicator 2:6

Table 2:6–6 Number of doctor's degrees conferred, by field and race and ethnicity: Selected academic years ending 1977–1985

Field of study	1977	1979	1981	1985
		White, non-Hispanic		
Total degrees	26,836	26,128	25,908	23,934
Humanities and social/behavioral sciences	10,042	9,633	9,050	8,067
Humanities	4,481	4,575	3,948	3,554
Social and behavioral sciences	5,561	5,058	5,102	4,513
Natural and computer sciences and engineering	7,800	7,494	7,665	7,055
Natural sciences	6,087	5,926	6,129	5,528
Life sciences	2,855	2,991	3,177	2,725
Physical sciences	2,623	2,415	2,445	2,431
Mathematics	609	520	507	372
Computer sciences and engineering	1,713	1,568	1,536	1,527
Computer and information sciences	160	175	184	150
Engineering	1,553	1,393	1,352	1,377
Technical/professional *	8,994	9,001	9,193	8,812
Education	6,616	6,333	6,391	5,615
Business and other technical/professional *	2,378	2,668	2,802	3,197
Business and management	668	662	619	589
Other technical/professional *	1,710	2,006	2,183	2,608
		Black, non-Hispanic		
Total degrees	1,253	1,267	1,265	1,154
Humanities and social/behavioral sciences	357	395	361	342
Humanities	135	152	145	117
Social and behavioral sciences	222	243	216	225
Natural and computer sciences and engineering	131	136	130	138
Natural sciences	107	108	105	95
Life sciences	52	47	64	53
Physical sciences	45	48	32	35
Mathematics	10	13	9	7
Computer sciences and engineering	24	28	25	43
Computer and information sciences	1	4	1	3
Engineering	23	24	24	40
Technical/professional *	765	736	774	674
Education	685	625	614	521
Business and other technical/professional *	80	111	160	153
Business and management	13	18	32	14
Other technical/professional *	67	93	128	139

Table 2:6–6 Number of doctor's degrees conferred, by field and race and ethnicity: Selected academic years ending 1977–1985—Continued

Field of study	1977	1979	1981	1985
		Hispanic		
Total degrees	522	439	456	677
Humanities and social/behavioral sciences	205	195	185	231
Humanities	88	92	68	100
Social and behavioral sciences	117	103	117	131
Natural and computer sciences and engineering	111	80	92	223
Natural sciences	86	57	69	132
Life sciences	29	28	40	67
Physical sciences	39	23	23	43
Mathematics	18	6	6	22
Computer sciences and engineering	25	23	23	91
Computer and information sciences	0	1	0	2
Engineering	25	22	23	89
Technical/professional *	206	164	179	223
Education	164	136	140	163
Business and other technical/professional *	42	28	39	60
Business and management	7	5	2	4
Other technical/professional *	35	23	37	56
		American Indian/Alaskan Native		
Total degrees	95	104	130	119
Humanities and social/behavioral sciences	27	37	36	27
Humanities	11	10	14	12
Social and behavioral sciences	16	27	22	15
Natural and computer sciences and engineering	27	16	20	24
Natural sciences	24	14	14	16
Life sciences	15	6	8	4
Physical sciences	6	8	4	12
Mathematics	3	0	2	0
Computer sciences and engineering	3	2	6	8
Computer and information sciences	1	0	1	1
Engineering	2	2	5	7
Technical/professional *	41	51	74	68
Education	32	43	57	51
Business and other technical/professional *	9	8	17	17
Business and management	3	3	5	4
Other technical/professional *	6	5	12	13

Table 2:6–6 Number of doctor's degrees conferred, by field and race and ethnicity: Selected academic years ending 1977–1985—Continued

Field of study	1977	1979	1981	1985
	Asian or Pacific Islander			
Total degrees	658	811	877	1,106
Humanities and social/behavioral sciences	146	165	184	230
Humanities	48	77	79	112
Social and behavioral sciences	98	88	105	118
Natural and computer sciences and engineering	354	468	482	621
Natural sciences	221	277	277	344
Life sciences	104	127	140	129
Physical sciences	94	121	106	179
Mathematics	23	29	31	36
Computer sciences and engineering	133	191	205	277
Computer and information sciences	9	8	14	14
Engineering	124	183	191	263
Technical/professional *	158	178	211	255
Education	77	97	105	84
Business and other technical/professional *	81	81	106	171
Business and management	16	12	25	35
Other technical/professional *	65	69	81	136
	Nonresident alien			
Total degrees	3,747	3,915	4,203	5,317
Humanities and social/behavioral sciences	857	885	895	1,105
Humanities	326	382	383	415
Social and behavioral sciences	531	503	512	690
Natural and computer sciences and engineering	1,926	1,907	2,000	2,775
Natural sciences	1,034	992	992	1,307
Life sciences	342	343	289	376
Physical sciences	532	487	530	682
Mathematics	160	162	173	249
Computer sciences and engineering	892	915	1,008	1,468
Computer and information sciences	45	48	52	70
Engineering	847	867	956	1,398
Technical/professional *	964	1,123	1,308	1,437
Education	381	497	593	598
Business and other technical/professional *	583	626	715	839
Business and management	161	163	161	203
Other technical/professional *	422	463	554	636

* In contrast to previous editions of *The Condition of Education*, computer sciences and engineering are not included in the technical/professional category.

NOTE: Distributions for 1977 through 1981 exclude degrees not reported by race and ethnicity. Distributions for 1985 include degrees for which missing race and ethnicity could be imputed. The number of degrees reported for 1977 and 1979 excludes degrees conferred by U.S. Service Schools (0.4 percent or less of degrees).,

SOURCE: U.S. Department of Education, Office for Civil Rights, Survey of Earned Degrees Conferred by Institutions of Higher Education by Race, Ethnicity, and Sex, academic years ending 1977 and 1979; National Center for Education Statistics, Degrees and Other Formal Awards Conferred surveys, academic years ending 1981 and 1985.

Indicator 2:7

Table 2:7–1 Percent of degrees earned by women, by degree level: Academic years ending 1971–1986

Academic year ending	Associate degrees	Bachelor's degrees	Master's degrees	Doctor's degrees	First-professional degrees *
1971	42.8	43.4	40.1	14.3	6.3
1972	43.1	43.6	40.6	15.8	6.2
1973	44.5	43.8	41.3	17.8	7.1
1974	45.2	44.2	43.0	19.1	9.8
1975	47.0	45.3	44.8	21.3	12.4
1976	46.4	45.5	46.4	22.9	15.6
1977	48.1	46.1	47.1	24.3	18.6
1978	50.3	47.1	48.3	26.4	21.5
1979	52.3	48.2	49.1	28.1	23.5
1980	54.2	49.0	49.4	29.7	24.8
1981	54.7	49.8	50.3	31.1	26.6
1982	54.7	50.3	50.8	32.1	27.5
1983	54.6	50.6	50.1	33.2	29.8
1984	55.2	50.5	49.5	33.6	31.0
1985	55.4	50.7	49.9	34.1	32.8
1986	56.0	50.8	50.3	35.2	33.4

* The National Center for Education Statistics recognizes 10 first-professional degree fields: chiropractic, dentistry, law, medicine, optometry, osteopathy, pharmacy, podiatry, theology, and veterinary medicine.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1988* (based on the HEGIS survey Degrees and Other Formal Awards Conferred, various years).

Indicator 2:7

Table 2:7-2 Number of degrees conferred, by degree level and gender: Academic years ending 1971-1986

Academic year ending	Associate degrees		Bachelor's degrees		Master's degrees	
	Men	Women	Men	Women	Men	Women
1971	144,395	108,215	475,594	364,136	138,146	92,363
1972	166,317	125,802	500,590	386,683	149,550	102,083
1973	175,413	140,761	518,191	404,171	154,468	108,903
1974	188,591	155,333	527,313	418,463	157,842	119,191
1975	191,017	169,154	504,841	418,092	161,570	130,880
1976	209,996	181,458	504,925	420,821	167,248	144,523
1977	210,842	195,535	495,545	424,004	167,783	149,381
1978	204,718	207,528	487,347	433,857	161,212	150,408
1979	192,091	210,611	477,344	444,046	153,370	147,709
1980	183,737	217,173	473,611	455,806	150,749	147,332
1981	188,638	227,739	469,883	465,257	147,043	148,696
1982	196,939	237,576	473,364	479,634	145,532	150,014
1983	207,141	249,300	479,140	490,370	144,697	145,224
1984	202,762	249,654	482,319	491,990	143,595	140,668
1985	202,932	251,780	482,528	496,949	143,390	142,861
1986	196,166	249,881	485,923	501,900	143,508	145,059

Table 2:7–2 Number of degrees conferred, by degree level and gender: Academic years ending 1971–1986—Continued

Academic year ending	Doctor's degrees		First-professional degrees *	
	Men	Women	Men	Women
1971	27,530	4,577	35,544	2,402
1972	28,090	5,273	40,723	2,688
1973	28,571	6,206	46,489	3,529
1974	27,365	6,451	48,530	5,286
1975	26,817	7,266	48,956	6,960
1976	26,267	7,797	52,892	9,757
1977	25,142	8,090	52,374	11,985
1978	23,658	8,473	52,270	14,311
1979	23,541	9,189	52,652	16,196
1980	22,943	9,672	52,716	17,415
1981	22,711	10,247	52,792	19,164
1982	22,224	10,483	52,223	19,809
1983	21,902	10,873	51,310	21,826
1984	22,064	11,145	51,334	23,073
1985	21,700	11,243	50,455	24,608
1986	21,819	11,834	49,261	24,649

* The National Center for Education Statistics recognizes 10 first-professional degree fields: chiropractic, dentistry, law, medicine, optometry, osteopathy, pharmacy, podiatry, theology, and veterinary medicine.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1988* (based on the HEGIS survey Degrees and Other Formal Awards Conferred, various years).

Indicator 2:8

Table 2:8-1 Percent of bachelor's degrees earned by women, by field of study: Selected academic years ending 1971-1986

Field of study	1971	1973	1975	1977	1979
Total	43.4	43.8	45.3	46.1	48.2
Humanities and social/behavioral sciences	46.9	46.6	48.4	49.9	52.1
Humanities	58.4	57.0	56.8	56.2	57.4
Social and behavioral sciences	38.3	38.8	41.4	44.3	47.3
Natural and computer sciences and engineering	17.5	18.5	21.4	23.0	24.1
Natural sciences	27.8	29.0	31.4	33.0	35.5
Life sciences	29.1	29.8	33.1	36.2	40.2
Physical sciences	13.8	14.8	18.2	20.0	22.5
Mathematics	38.0	40.2	41.8	41.5	41.6
Computer sciences and engineering	1.4	2.3	3.8	6.7	10.7
Computer and information sciences	13.6	14.9	18.9	23.9	28.1
Engineering	0.8	1.2	2.2	4.5	8.3
Technical/professional *	49.6	49.9	50.7	50.9	53.6
Education	74.5	73.5	73.3	72.2	73.2
Business and other technical/professional *	26.7	30.0	36.9	41.3	46.6
Business and management	9.1	10.6	16.2	23.5	30.6
Other technical/professional *	52.8	53.7	56.3	57.2	61.9

Field of study	1981	1983	1985	1986
Total	49.8	50.6	50.7	50.8
Humanities and social/behavioral sciences	54.2	54.9	55.0	54.9
Humanities	58.4	58.4	58.7	58.5
Social and behavioral sciences	50.2	51.4	51.3	51.4
Natural and computer sciences and engineering	25.1	26.4	27.8	27.8
Natural sciences	37.9	39.9	41.4	41.9
Life sciences	44.1	46.1	47.8	48.1
Physical sciences	24.6	27.3	28.0	27.4
Mathematics	42.8	43.8	46.1	46.5
Computer sciences and engineering	14.0	17.5	20.0	20.0
Computer and information sciences	32.5	36.3	36.8	35.7
Engineering	10.3	12.3	13.2	13.1
Technical/professional *	55.7	57.3	58.2	58.4
Education	75.0	75.8	75.9	75.9
Business and other technical/professional *	50.3	52.9	54.4	54.7
Business and management	36.9	41.9	45.1	45.7
Other technical/professional *	64.8	66.2	66.3	66.5

* In contrast to previous editions of *The Condition of Education*, computer sciences and engineering are not included in the technical/professional category.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1988* (based on the HEGIS survey Degrees and Other Formal Awards Conferred, various years).

Table 2:8–2 Number of bachelor's degrees earned by women, by field of study: Selected academic years ending 1971–1986

Field of study	1971	1973	1975	1977	1979	1981	1983	1985	1986
Total	364,136	404,171	418,092	424,004	444,046	465,257	490,370	496,949	501,900
Humanities and social/behavioral sciences	157,856	166,274	163,829	154,875	150,289	149,037	147,407	144,952	146,396
Humanities	83,859	87,337	86,679	82,182	79,135	78,193	77,768	77,546	77,404
Social and behavioral sciences	73,997	78,937	77,150	72,693	71,154	70,844	69,639	67,406	68,992
Natural and computer sciences and engineering	23,519	26,191	30,477	33,530	37,405	42,309	50,123	58,951	59,621
Natural sciences	22,795	24,938	28,510	29,781	29,784	29,691	30,265	32,000	32,074
Life sciences	10,410	12,597	17,129	19,387	19,655	19,067	18,418	18,381	18,531
Physical sciences	2,953	3,070	3,786	4,501	5,222	5,888	6,389	6,637	5,962
Mathematics	9,432	9,271	7,595	5,893	4,907	4,736	5,458	6,982	7,581
Computer sciences and engineering	724	1,253	1,967	3,749	7,621	12,618	19,858	26,951	27,547
Computer and information sciences	324	640	953	1,531	2,447	4,919	8,904	14,299	14,966
Engineering	400	613	1,014	2,218	5,174	7,699	10,954	12,652	12,581
Technical/professional *	182,761	211,706	223,786	235,599	256,352	273,911	292,840	293,046	295,883
Education	131,520	142,788	122,458	103,781	92,290	81,233	74,321	66,897	66,235
Business and other technical/professional *	51,241	68,918	101,328	131,818	164,062	192,678	218,519	226,149	229,648
Business and management	10,461	13,366	21,599	35,438	52,537	73,543	95,175	105,319	108,889
Other technical/professional *	40,780	55,552	79,729	96,380	111,525	119,135	123,344	120,830	120,759

* In contrast to previous editions of *The Condition of Education*, computer sciences and engineering are not included in the technical/professional category.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1988* (based on the HEGIS survey Degrees and Other Formal Awards Conferred, various years).

Table 2:8–3 Percent of master's degrees earned by women, by field of study: Selected academic years ending 1971–1986

Field of study	1971	1973	1975	1977	1979	1981	1983	1985	1986
Total	40.1	41.3	44.8	47.1	49.1	50.3	50.1	49.9	50.3
Humanities and social/behavioral sciences	42.6	41.9	44.0	45.4	47.9	48.9	49.9	51.5	52.1
Humanities	51.4	50.5	51.8	51.0	52.0	51.0	51.4	52.7	53.1
Social and behavioral sciences	30.3	30.7	33.8	38.2	42.5	45.8	47.9	49.7	50.5
Natural and computer sciences and engineering	13.1	13.1	14.4	16.4	18.1	19.0	20.5	21.5	22.5
Natural sciences	24.8	24.2	25.3	28.4	30.1	31.0	33.2	34.7	35.1
Life sciences	33.6	30.5	30.0	33.7	37.6	38.9	43.6	47.7	47.8
Physical sciences	13.3	13.5	14.4	16.5	18.2	20.5	21.4	23.2	24.3
Mathematics	29.2	29.9	32.9	35.2	34.6	34.1	34.5	35.0	35.2
Computer sciences and engineering	1.9	2.7	4.0	6.2	8.2	11.1	13.4	15.2	16.5
Computer and information sciences	10.3	10.6	14.7	16.7	18.8	23.0	28.3	28.7	29.9
Engineering	1.1	1.7	2.4	4.4	6.1	8.2	9.3	10.7	11.5
Technical/professional *	45.7	47.1	50.1	52.3	54.1	55.7	55.7	55.6	56.0
Education	56.2	58.2	62.2	65.9	68.6	71.4	72.6	72.5	72.9
Business and other technical/professional *	29.2	29.9	32.5	35.1	38.8	42.0	43.7	45.1	45.4
Business and management	3.9	4.9	8.4	14.3	19.2	25.1	28.9	31.0	31.1
Other technical/professional *	51.8	50.6	51.3	52.9	56.5	59.5	61.4	62.7	62.9

* In contrast to previous editions of *The Condition of Education*, computer sciences and engineering are not included in the technical/professional category.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1988* (based on the HEGIS survey Degrees and Other Formal Awards Conferred, various years).

Indicator 2:8

Table 2:8-4 Number of master's degrees earned by women, by field of study: Selected academic years ending 1971-1986

Field of study	1971	1973	1975	1977	1979	1981	1983	1985	1986
Total	92,363	108,903	130,880	149,381	147,709	148,696	145,224	142,861	145,059
Humanities and social/behavioral sciences	21,424	22,221	24,445	24,834	23,582	23,389	23,105	23,653	23,936
Humanities	15,079	15,126	16,357	15,791	14,744	14,297	13,769	14,309	14,477
Social and behavioral sciences	6,345	7,095	8,088	9,043	8,838	9,092	9,336	9,344	9,459
Natural and computer sciences and engineering	4,636	4,758	4,936	5,762	6,133	6,616	7,899	9,109	9,846
Natural sciences	4,287	4,255	4,223	4,576	4,607	4,283	4,594	4,764	4,941
Life sciences	1,923	1,909	1,963	2,396	2,566	2,324	2,482	2,412	2,397
Physical sciences	846	843	838	881	990	1,084	1,133	1,344	1,432
Mathematics	1,518	1,503	1,422	1,299	1,051	875	979	1,008	1,112
Computer sciences and engineering	349	503	713	1,186	1,526	2,333	3,305	4,345	4,905
Computer and information sciences	164	225	338	466	575	971	1,508	2,037	2,412
Engineering	185	278	375	720	951	1,362	1,797	2,308	2,493
Technical/professional *	66,303	81,924	101,499	118,785	117,994	118,691	114,220	110,099	111,277
Education	49,975	61,437	74,748	83,537	76,852	70,682	61,621	55,192	55,634
Business and other technical/professional *	16,328	20,487	26,751	35,248	41,142	48,009	52,599	54,907	55,643
Business and management	1,038	1,526	3,062	6,654	9,671	14,504	18,862	20,903	20,849
Other technical/professional *	15,290	18,961	23,689	28,594	31,471	33,505	33,737	34,004	34,794

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* In contrast to previous editions of *The Condition of Education*, computer sciences and engineering are not included in the technical/professional category.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1988* (based on the HEGIS survey Degrees and Other Formal Awards Conferred, various years).

Indicator 2:8

Table 2:8-5 Percent of doctor's degrees earned by women, by field of study: Selected academic years ending 1971–1986

Field of study	1971	1973	1975	1977	1979	1981	1983	1985	1986
Total	14.3	17.8	21.3	24.3	28.1	31.1	33.2	34.1	35.2
Humanities and social/behavioral sciences	20.2	23.6	27.0	29.4	31.9	34.6	37.5	38.4	40.2
Humanities	23.9	27.8	30.1	31.3	31.6	34.1	35.2	35.6	36.9
Social and behavioral sciences	17.2	20.0	24.5	27.9	32.1	34.9	39.3	40.5	42.6
Natural and computer sciences and engineering	7.4	9.3	10.9	12.0	14.7	16.1	17.4	18.3	18.5
Natural sciences	10.1	12.4	14.5	15.3	18.7	20.3	22.6	23.7	24.1
Life sciences	16.3	19.5	22.0	21.4	25.6	28.3	32.2	32.8	33.6
Physical sciences	5.6	6.7	8.3	9.5	11.3	12.0	14.0	16.2	16.6
Mathematics	7.8	9.6	11.3	13.2	16.7	15.7	16.6	15.6	16.7
Computer sciences and engineering	0.7	1.9	2.4	3.3	4.1	4.6	5.1	6.7	7.3
Computer and information sciences	2.3	7.7	6.6	8.8	12.7	9.9	13.0	10.1	13.1
Engineering	0.6	1.5	2.1	2.8	3.3	4.1	4.4	6.4	6.7
Technical/professional *	17.6	21.5	25.9	30.5	36.2	41.2	43.2	45.3	46.9
Education	21.2	24.8	30.9	34.8	42.2	47.3	50.2	52.2	53.4
Business and other technical/professional *	9.7	14.3	15.0	19.6	23.2	28.6	30.8	34.4	36.7
Business and management	2.9	5.6	4.1	6.3	11.6	14.8	16.8	17.1	21.7
Other technical/professional *	12.4	17.6	19.6	24.6	26.9	32.5	34.1	38.5	40.8

* In contrast to previous editions of *The Condition of Education*, computer sciences and engineering are not included in the technical/professional category.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1988* (based on the HEGIS survey Degrees and Other Formal Awards Conferred, various years).

Table 2:8–6 Number of doctor's degrees earned by women, by field of study: Selected academic years ending 1971–1986

Field of study	1971	1973	1975	1977	1979
Total	4,577	6,206	7,266	8,090	9,189
Humanities and social/behavioral sciences	1,977	2,762	3,228	3,448	3,618
Humanities	1,043	1,496	1,597	1,622	1,687
Social and behavioral sciences	934	1,266	1,631	1,826	1,931
Natural and computer sciences and engineering	960	1,149	1,234	1,246	1,491
Natural sciences	934	1,080	1,154	1,154	1,378
Life sciences	595	710	743	726	906
Physical sciences	246	268	301	319	350
Mathematics	93	102	110	109	122
Computer sciences and engineering	26	69	80	92	113
Computer and information sciences	3	15	14	19	30
Engineering	23	54	66	73	83
Technical/professional *	1,640	2,295	2,804	3,396	4,080
Education	1,358	1,814	2,299	2,774	3,264
Business and other technical/professional *	282	481	505	622	816
Business and management	23	52	41	54	100
Other technical/professional *	259	429	464	568	716

Field of study	1981	1983	1985	1986
Total	10,247	10,873	11,243	11,834
Humanities and social/behavioral sciences	3,740	3,980	3,919	4,259
Humanities	1,621	1,604	1,585	1,683
Social and behavioral sciences	2,119	2,376	2,334	2,576
Natural and computer sciences and engineering	1,671	1,808	2,019	2,115
Natural sciences	1,542	1,649	1,786	1,841
Life sciences	1,052	1,075	1,125	1,129
Physical sciences	376	458	552	588
Mathematics	114	116	109	124
Computer sciences and engineering	129	159	233	274
Computer and information sciences	25	34	25	45
Engineering	104	125	208	229
Technical/professional *	4,836	5,085	5,305	5,460
Education	3,736	3,787	3,732	3,795
Business and other technical/professional *	1,100	1,298	1,573	1,665
Business and management	125	136	148	210
Other technical/professional *	975	1,162	1,425	1,455

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* In contrast to previous editions of *The Condition of Education*, computer sciences and engineering are not included in the technical/professional category.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1988* (based on the HEGIS survey Degrees and Other Formal Awards Conferred, various years).

Indicator 2:9

Table 2:9–1 Number of degrees earned by foreign students, by field and degree level: Selected academic years ending 1977–1985

Field of study	1977	1979	1981	1985	Percent change 1977–1985
			Bachelor's degrees		
All fields	15,703	17,831	22,589	29,217	86.1
Humanities and social/behavioral sciences	3,865	4,208	4,612	5,443	40.8
Humanities	1,812	2,027	2,152	2,649	46.2
Social and behavioral sciences	2,053	2,181	2,460	2,794	36.1
Natural and computer sciences and engineering	5,745	7,080	9,828	11,971	108.4
Natural sciences	1,911	1,944	2,088	2,460	28.7
Life sciences	1,028	887	901	911	-11.4
Physical sciences	567	693	732	788	39.0
Mathematics	316	364	455	761	140.8
Computer sciences and engineering	3,834	5,136	7,740	9,511	148.1
Computer and information sciences	265	376	777	2,116	698.5
Engineering	3,569	4,760	6,963	7,395	107.2
Technical/professional *	6,093	6,543	8,149	11,803	93.7
Education	741	869	908	1,015	37.0
Business and other technical/professional *	5,352	5,674	7,241	10,788	101.6
Business and management	3,316	3,499	4,566	7,428	124.0
Other technical professional *	2,036	2,175	2,675	3,360	65.0
			Master's degrees		
All fields	17,338	19,405	22,057	26,952	55.5
Humanities and social/behavioral sciences	3,076	3,085	3,737	4,357	41.6
Humanities	1,429	1,426	1,872	2,236	56.5
Social and behavioral sciences	1,647	1,659	1,865	2,121	28.8
Natural and computer sciences and engineering	5,410	6,059	7,085	9,781	80.8
Natural sciences	1,503	1,642	1,618	2,259	50.3
Life sciences	477	464	368	474	-0.6
Physical sciences	656	706	786	1,100	67.7
Mathematics	370	472	464	685	85.1
Computer sciences and engineering	3,907	4,417	5,467	7,522	92.5
Computer and information sciences	366	465	904	1,709	366.9
Engineering	3,541	3,952	4,563	5,813	64.2
Technical/professional *	8,852	10,261	11,235	12,814	44.8
Education	2,391	2,744	2,699	2,919	22.1
Business and other technical/professional *	6,461	7,517	8,536	9,895	53.1
Business and management	3,781	4,388	5,051	5,816	53.8
Other technical/professional *	2,680	3,129	3,485	4,079	52.2

Indicator 2:9

Table 2:9-1 Number of degrees earned by foreign students, by field and degree level: Selected academic years ending 1977-1985—Continued

Field of study	1977	1979	1981	1985	Percent change 1977-1985
			Doctor's degrees		
All fields	3,747	3,915	4,203	5,317	41.9
Humanities and social/behavioral sciences	857	885	895	1,105	28.9
Humanities	326	382	383	415	27.3
Social and behavioral sciences	531	503	512	690	29.9
Natural and computer sciences and engineering	1,926	1,907	2,000	2,775	44.1
Natural sciences	1,034	992	992	1,307	26.4
Life sciences	342	343	289	376	9.9
Physical sciences	532	487	530	682	28.2
Mathematics	160	162	173	249	55.6
Computer sciences and engineering	892	915	1,008	1,468	64.6
Computer and information sciences	45	48	52	70	55.6
Engineering	847	867	956	1,398	65.1
Technical/professional *	964	1,123	1,308	1,437	49.1
Education	381	497	593	598	57.0
Business and other technical/professional *	583	626	715	839	43.9
Business and management	161	163	161	203	26.1
Other technical/professional *	422	463	554	636	50.7

* The technical/professional category does not include computer sciences and engineering.

NOTE: Foreign students are non-United States citizens on temporary visas. The total number of degrees reported in this table for each degree level and field of study is lower, but by no more than 2 percent, than the total actually conferred. This is because racial/ethnic citizenship status data were not imputed for some of the institutions that did not report such data.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics*, various years (based on the HEGIS survey Degrees and Other Formal Awards Conferred, 1980-81 and 1984-85 and Office for Civil Rights, Data on Earned Degrees Conferred by Institutions of Higher Education by Race, Ethnicity, and Sex, Academic Years 1976-77 and 1978-79).

Indicator 2:9

Table 2:9–2 Percent of degrees earned by foreign students, by field and degree level: Selected academic years ending 1977–1985

Field of study	1977	1979	1981	1985
		Bachelor's degrees		
All fields	1.7	1.9	2.4	3.0
Humanities and social/behavioral sciences	1.3	1.5	1.7	2.1
Humanities	1.3	1.5	1.6	2.0
Social and behavioral sciences	1.3	1.5	1.7	2.1
Natural and computer sciences and engineering	4.0	4.6	5.8	5.7
Natural sciences	2.1	2.3	2.7	3.2
Life sciences	1.9	1.8	2.1	2.4
Physical sciences	2.6	3.0	3.1	3.3
Mathematics	2.2	3.1	4.1	5.1
Computer sciences and engineering	7.0	7.3	8.6	7.1
Computer and information sciences	4.2	4.3	5.1	5.5
Engineering	7.4	7.7	9.3	7.8
Technical/professional *	1.3	1.4	1.7	2.4
Education	0.5	0.7	0.8	1.2
Business and other technical/professional *	1.7	1.6	1.9	2.6
Business and management	2.2	2.0	2.3	3.2
Other technical professional *	1.2	1.2	1.5	1.9
		Master's degrees		
All fields	5.5	6.5	7.5	9.6
Humanities and social/behavioral sciences	5.6	6.2	7.8	9.9
Humanities	4.6	5.0	6.7	8.8
Social and behavioral sciences	6.9	7.9	9.4	11.4
Natural and computer sciences and engineering	15.6	18.1	20.7	23.7
Natural sciences	9.3	10.8	11.8	16.7
Life sciences	6.7	6.8	6.2	9.5
Physical sciences	12.4	13.1	15.0	19.4
Mathematics	10.0	15.6	18.1	24.2
Computer sciences and engineering	21.0	24.2	26.7	27.2
Computer and information sciences	13.4	15.6	21.8	24.6
Engineering	22.3	25.9	27.9	28.0
Technical/professional *	3.9	4.7	5.3	6.6
Education	1.9	2.5	2.7	3.8
Business and other technical/professional *	6.5	7.1	7.5	8.3
Business and management	8.2	8.8	8.8	8.7
Other technical/professional *	5.0	5.6	6.2	7.7

Table 2:9-2 Percent of degrees earned by foreign students, by field and degree level: Selected academic years ending 1977-1985—Continued

Field of study	1977	1979	1981	1985
	Doctor's degrees			
All fields	11.3	12.0	12.8	16.5
Humanities and social/behavioral sciences	7.4	7.8	8.4	11.0
Humanities	6.4	7.2	8.3	9.6
Social and behavioral sciences	8.1	8.4	8.4	12.1
Natural and computer sciences and engineering	18.6	18.9	19.3	25.6
Natural sciences	13.7	13.5	13.1	17.6
Life sciences	10.1	9.7	7.8	11.2
Physical sciences	15.9	15.7	16.9	20.2
Mathematics	19.4	22.2	23.8	36.3
Computer sciences and engineering	32.0	33.6	36.0	43.0
Computer and information sciences	20.8	20.3	20.6	29.2
Engineering	32.9	34.8	37.5	44.0
Technical/professional *	8.7	10.0	11.1	12.5
Education	4.8	6.4	7.5	8.5
Business and other technical/professional *	18.4	17.8	18.6	18.9
Business and management	18.5	18.9	19.1	23.9
Other technical/professional *	18.3	17.4	18.5	17.7

* The technical/professional category does not include computer sciences and engineering.

NOTE: Foreign students are non-United States citizens on temporary visas.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics*, various years (based on the HEGIS survey Degrees and Other Formal Awards Conferred, 1980-81 and 1984-85 and Office for Civil Rights, Data on Earned Degrees Conferred by Institutions of Higher Education by Race, Ethnicity, and Sex, Academic Years 1976-77 and 1978-79).

Indicator 2:9

Table 2:9–3 Postgraduation plans of foreign doctorate recipients with temporary U.S. visas, by major field: Academic years ending 1976–1987

Year of doctorate	Number of recipients [1]	Percent of recipients			
		Definite plans	Definite plans in the United States		
			Total [2]	Employment	Postdoctoral study
		Natural and computer sciences and engineering [3]			
1976	2,080	61.3	26.4	10.4	15.8
1977	2,024	60.9	28.0	11.8	15.9
1978	1,973	63.8	31.5	12.4	19.1
1979	2,044	67.7	33.0	14.7	18.1
1980	2,131	67.5	34.2	15.8	18.1
1981	2,308	64.8	33.2	18.2	14.8
1982	2,471	65.1	32.7	17.9	14.6
1983	2,725	64.4	31.0	16.0	15.0
1984	2,935	61.5	33.3	15.6	17.6
1985	3,264	62.3	33.2	15.3	17.7
1986	3,338	64.7	37.1	15.5	21.5
1987	3,671	64.6	35.9	13.4	22.5
		All other fields			
1976	1,449	66.5	12.7	10.5	2.1
1977	1,424	66.1	12.2	10.3	1.5
1978	1,448	69.5	14.4	12.6	1.7
1979	1,543	67.3	13.1	11.0	1.9
1980	1,512	66.7	11.8	8.9	2.8
1981	1,632	68.3	13.8	10.8	2.8
1982	1,733	65.6	12.0	9.6	2.4
1983	1,774	63.7	13.0	10.8	2.3
1984	1,892	61.9	12.7	10.1	2.5
1985	1,965	63.9	15.7	13.1	2.5
1986	1,929	65.3	18.4	15.0	3.2
1987	1,922	64.8	20.9	17.2	3.7

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[1] Due to differences in survey design, the total number of doctorates received by foreign students obtained by the National Science Foundation's survey is smaller than that obtained by the U.S. Department of Education's survey (see table 2:9-1).

[2] Includes a small proportion (less than 1 percent) whose plans are unknown.

[3] Physical and life sciences, mathematics, computer and information sciences, and engineering.

SOURCE: National Science Foundation, *Science and Engineering Doctorates: 1960–86, Early Release of Summary Statistics on Science and Engineering Doctorates 1987*; and unpublished tabulations.

Indicator 2:10

Table 2:10–1 Median earnings and earnings ratios of year-round, full-time workers 25–34 years old, by educational attainment and by race and gender: 1978–1988

Year (March)	Median earnings: 4 years of high school	Earning ratios *		Median earnings: 4 years of high school	Earning ratios *	
		1–3 years college to 4 years high school	4 or more years college to 4 years high school		1–3 years college to 4 years high school	4 or more years college to 4 years high school
		White			Black	
1978	$11,825	1.07	1.20	$9,330	1.12	1.38
1979	12,351	1.09	1.24	10,410	1.15	1.27
1980	13,357	1.13	1.24	10,950	1.14	1.35
1981	14,563	1.09	1.24	12,001	1.08	1.29
1982	15,308	1.10	1.33	13,106	1.06	1.27
1983	15,754	1.14	1.32	13,083	1.12	1.34
1984	16,356	1.15	1.32	13,229	1.19	1.38
1985	17,597	1.14	1.30	13,337	1.14	1.50
1986	17,708	1.18	1.43	14,276	1.09	1.46
1987	18,238	1.16	1.41	14,357	1.12	1.49
1988	18,869	1.12	1.41	14,699	1.21	1.45
		Men			Women	
1978	13,472	1.06	1.17	8,662	1.12	1.29
1979	15,048	1.02	1.12	9,195	1.09	1.29
1980	15,860	1.04	1.16	9,914	1.13	1.33
1981	16,752	1.05	1.21	11,001	1.12	1.35
1982	17,664	1.09	1.27	11,755	1.13	1.39
1983	18,137	1.12	1.28	12,475	1.16	1.37
1984	18,815	1.12	1.32	12,867	1.19	1.37
1985	20,399	1.10	1.26	13,571	1.15	1.43
1986	20,092	1.14	1.35	14,246	1.15	1.47
1987	20,540	1.14	1.35	14,424	1.17	1.52
1988	21,317	1.11	1.35	15,150	1.15	1.50

* The earnings ratio is the earnings of those completing 1-3 or 4 or more years of college divided by the earnings of those completing only 4 years of high school.

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, March of various years; and unpublished tabulations.

Table 2:10–2 Median earnings of year-round, full-time workers 25–34 years old, by educational attainment and by race and gender: 1978–1988

Year (March)	4 years of high school	1-3 years of college	4 or more years of college	4 years of high school	1-3 years of college	4 or more years of college
		White			Black	
1978	$11,825	$12,711	$14,221	$9,330	$10,430	$12,843
1979	12,351	13,431	15,298	10,410	11,922	13,192
1980	13,357	15,094	16,497	10,950	12,492	14,802
1981	14,563	15,851	18,111	12,001	12,940	15,471
1982	15,308	16,860	20,314	13,106	13,939	16,608
1983	15,754	17,916	20,864	13,083	14,696	17,568
1984	16,356	18,772	21,527	13,229	15,681	18,266
1985	17,597	20,051	22,945	13,337	15,168	19,968
1986	17,708	20,864	25,393	14,276	15,500	20,815
1987	18,238	21,224	25,795	14,357	16,133	21,395
1988	18,869	21,049	26,674	14,699	17,745	21,289
		Men			Women	
1978	13,472	14,237	15,770	8,662	9,669	11,161
1979	15,048	15,358	16,861	9,195	10,048	11,880
1980	15,860	16,512	18,359	9,914	11,164	13,163
1981	16,752	17,618	20,320	11,001	12,357	14,874
1982	17,664	19,321	22,464	11,755	13,337	16,286
1983	18,137	20,307	23,253	12,475	14,419	17,087
1984	18,815	20,988	24,799	12,867	15,361	17,587
1985	20,399	22,371	25,720	13,571	15,609	19,351
1986	20,092	22,972	27,199	14,246	16,382	20,999
1987	20,540	23,469	27,693	14,424	16,946	21,883
1988	21,317	23,582	28,715	15,150	17,448	22,674

SOURCE: U.S. Department of Commerce, Bureau of the Census, Current Population Survey, March of various years; and unpublished tabulations.

Indicator 2:11

Table 2:11-1 Research and development (R&D) expenditures at doctorate-granting institutions, by source of funds: Fiscal years 1972-1987

Year [1]	R&D expenditures at doctorate-granting institutions				Source of funds at doctorate-granting institutions					
	Current dollars	Constant 1982 dollars [2]	As a percent of national R&D expenditures	National R&D expenditures as a percent of GNP	Total	Federal gov't	State/ local gov't	Industry	Institution	Other
	(In thousands)				(Percentage distribution)					
1972	$2,568,573	$5,523,813	9.0	2.3	100.0	68.3	10.2	2.8	11.6	7.1
1973	2,809,160	5,675,071	9.1	2.3	100.0	69.0	10.0	2.9	11.1	7.0
1974	2,953,658	5,469,737	9.0	2.2	100.0	67.4	10.0	3.2	12.3	7.2
1975	3,338,409	5,629,695	9.5	2.2	100.0	67.1	9.7	3.3	12.3	7.6
1976	3,656,888	5,795,385	9.4	2.2	100.0	67.4	9.7	3.3	11.9	7.6
1977	3,987,885	5,925,535	9.3	2.1	100.0	67.1	9.2	3.4	12.6	7.7
1978	4,540,256	6,288,443	9.4	2.1	100.0	66.2	8.9	3.7	13.4	7.8
1979	5,271,643	6,706,925	9.6	2.2	100.0	67.0	8.8	3.6	13.6	7.0
1980	5,960,505	6,955,082	9.5	2.3	100.0	67.6	8.1	3.9	13.8	6.7
1981	6,733,086	7,162,857	9.4	2.4	100.0	66.6	8.0	4.3	14.8	6.3
1982	7,207,151	7,207,151	9.1	2.5	100.0	65.0	8.3	4.6	15.4	6.7
1983	7,761,865	7,470,515	8.9	2.6	100.0	63.2	7.9	4.9	16.7	7.4
1984	8,484,591	7,877,986	8.7	2.6	100.0	62.8	7.9	5.5	16.6	7.1
1985	9,550,880	8,612,155	8.9	2.7	100.0	62.4	7.7	5.8	16.9	7.2
1986	10,769,068	9,454,845	9.2	2.7	100.0	61.3	8.4	6.3	17.3	6.7
1987	11,930,997	10,136,786	9.6	2.8	100.0	60.6	8.4	6.4	17.7	6.9

[1] Data for 1980 through 1986 revised from previously published figures.

[2] Based on GNP implicit price deflator; base year = 1982.

NOTE: R&D expenditures include separately budgeted expenditures for basic research and for applied research and development. They do not include expenditures by university-administered, federally funded research and development centers (FFRDC's). R&D expenditures at doctorate-granting institutions made up 98.6 percent of total academic R&D expenditures in 1986. Detail may not add to totals due to rounding.

SOURCE: National Science Board, *Science & Engineering Indicators-1987*; National Science Foundation, *Early Release of Summary Statistics on Academic Science/ Engineering Resources*, October 1988 (based on Scientific and Engineering Expenditures at Universities and Colleges survey, various years); U.S. Council of Economic Advisors, *Economic Indicators*, November 1988.

Indicator 2:12

Table 2:12–1 **Percentage distribution of general education revenues of higher education, by control and level of institution and source of revenue: Fiscal year 1986**

Source of revenue	Level of institution		
	All	4-year	2-year
		All institutions	
Total	100.0	100.0	100.0
Tuition and fees *	27.0	28.8	16.4
Government appropriations	42.3	38.2	66.3
Federal	2.1	2.4	0.6
State and local	40.2	35.8	65.8
Government grants and contracts	17.5	17.9	15.1
Federal	15.0	15.6	11.6
State and local	2.5	2.3	3.5
Private gifts, grants, and contracts	7.1	8.1	1.2
Endowment income	3.0	3.5	0.3
Sales and services of educational activities	3.1	3.5	0.6
		Public institutions	
Total	100.0	100.0	100.0
Tuition and fees *	14.6	15.2	12.1
Government appropriations	61.1	58.4	72.0
Federal	2.7	3.2	0.6
State and local	58.4	55.2	71.4
Government grants and contracts	16.4	16.9	14.6
Federal	13.8	14.6	10.9
State and local	2.6	2.3	3.7
Private gifts, grants, and contracts	4.1	4.9	0.6
Endowment income	0.8	0.9	0.1
Sales and services of educational activities	3.1	3.7	0.6

Table 2:12-1 Percentage distribution of general education revenues of higher education, by control and level of institution and source of revenue: Fiscal year 1986—Continued

Source of revenue	Level of institution		
	All	4-year	2-year
		Private institutions	
Total	100.0	100.0	100.0
Tuition and fees *	53.4	52.9	66.7
Government appropriations	2.3	2.3	1.1
Federal	0.9	0.9	0.6
State and local	1.4	1.4	0.6
Government grants and contracts	19.8	19.8	21.4
Federal	17.5	17.4	19.4
State and local	2.4	2.4	2.0
Private gifts, grants, and contracts	13.6	13.8	7.5
Endowment income	7.7	7.9	2.0
Sales and services of educational activities	3.2	3.3	1.3

* Excludes Pell Grants.

NOTE: Percentages were calculated from unrounded data.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1988* (based on the HEGIS survey Financial Statistics of Institutions of Higher Education, fiscal year 1986).

Table 2:12-2 General education revenues in *current* dollars for institutions of higher education, by control of institution and source of revenue: Selected fiscal years 1976–1986

(In billions)

Source of revenue	1976	1978	1980	1982	1984	1986
	All institutions					
Total	$30.7	$36.5	$44.7	$54.7	$61.6	$76.1
Tuition and fees *	8.2	9.9	11.9	15.8	17.6	20.6
Government appropriations	14.0	16.7	20.1	23.9	26.9	32.2
Federal	0.9	1.0	1.2	1.3	1.4	1.6
State and local	13.2	15.7	18.9	22.6	25.5	30.6
Government grants and contracts	5.2	5.9	7.5	8.2	8.8	13.3
Federal	4.5	5.1	6.5	7.0	7.4	11.4
State and local	0.7	0.8	1.0	1.2	1.4	1.9
Private gifts, grants, and contracts	1.9	2.3	2.8	3.6	4.4	5.4
Endowment income	0.7	0.8	1.2	1.6	1.9	2.3
Sales and services of educational activities	0.6	0.9	1.2	1.6	2.0	2.4
	Public institutions					
Total	21.7	25.7	31.3	37.5	41.6	51.8
Tuition and fees *	3.5	4.1	4.9	6.4	6.6	7.6
Government appropriations	13.8	16.4	19.7	23.4	26.4	31.6
Federal	0.8	0.9	1.0	1.1	1.2	1.4
State and local	13.0	15.5	18.7	22.3	25.2	30.2
Government grants and contracts	3.3	3.7	4.7	5.1	5.4	8.5
Federal	2.8	3.1	4.0	4.2	4.4	7.2
State and local	0.5	0.6	0.7	0.9	1.0	1.3
Private gifts, grants, and contracts	0.6	0.8	1.0	1.3	1.6	2.1
Endowment income	0.1	0.1	0.2	0.2	0.3	0.4
Sales and services of educational activities	0.4	0.6	0.8	1.1	1.3	1.6

Table 2:12–2 General education revenues in *current* dollars for institutions of higher education, by control of institution and source of revenue: Selected fiscal years 1976–1986—Continued

(In billions)

Source of revenue	1976	1978	1980	1982	1984	1986
	Private institutions					
Total	$9.0	$10.8	$13.6	$17.3	$20.0	$24.3
Tuition and fees *	4.7	5.7	7.1	9.4	11.0	13.0
Government appropriations	0.3	0.4	0.4	0.5	0.5	0.5
Federal	0.1	0.2	0.2	0.2	0.2	0.2
State and local	0.2	0.2	0.2	0.3	0.3	0.3
Government grants and contracts	1.9	2.2	2.9	3.2	3.4	4.8
Federal	1.7	2.0	2.6	2.8	2.9	4.2
State and local	0.2	0.2	0.3	0.4	0.5	0.6
Private gifts, grants, and contracts	1.3	1.5	1.8	2.3	2.8	3.3
Endowment income	0.6	0.7	1.0	1.4	1.6	1.9
Sales and services of educational activities	0.2	0.3	0.4	0.5	0.7	0.8

* Excludes Pell Grants.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics*, various years (based on the HEGIS survey Financial Statistics of Institutions of Higher Education, various years).

Table 2:12–3 General education revenues in *constant* 1986 dollars for institutions of higher education, by control of institution and source of revenue: Selected fiscal years 1976–1986

(In billions)

Source of revenue	1976	1978	1980	1982	1984	1986
			All institutions			
Total	$60.3	$63.4	$62.9	$63.2	$65.8	$76.1
Tuition and fees *	16.0	17.1	16.7	18.2	18.8	20.6
Government appropriations	27.6	29.1	28.2	27.6	28.7	32.2
Federal	1.8	1.8	1.7	1.5	1.5	1.6
State and local	25.8	27.3	26.5	26.1	27.2	30.6
Government grants and contracts	10.2	10.2	10.6	9.5	9.4	13.3
Federal	8.8	8.8	9.2	8.1	7.9	11.4
State and local	1.4	1.4	1.5	1.4	1.5	1.9
Private gifts, grants, and contracts	3.8	4.0	3.9	4.1	4.7	5.4
Endowment income	1.3	1.4	1.6	1.8	2.0	2.3
Sales and services of educational activities	1.3	1.5	1.7	1.8	2.1	2.4
			Public institutions			
Total	42.5	44.6	43.8	43.3	44.5	51.8
Tuition and fees *	6.8	7.2	6.8	7.4	7.1	7.6
Government appropriations	27.0	28.5	27.6	27.0	28.2	31.6
Federal	1.5	1.6	1.4	1.3	1.3	1.4
State and local	25.5	26.9	26.2	25.8	26.9	30.2
Government grants and contracts	6.5	6.4	6.6	5.9	5.8	8.5
Federal	5.5	5.4	5.6	4.9	4.7	7.2
State and local	0.9	1.0	1.0	1.0	1.0	1.3
Private gifts, grants, and contracts	1.2	1.3	1.4	1.5	1.7	2.1
Endowment income	0.2	0.2	0.3	0.3	0.3	0.4
Sales and services of educational activities	0.8	1.0	1.1	1.2	1.4	1.6

Table 2:12-3 General education revenues in *constant* 1986 dollars for institutions of higher education, by control of institution and source of revenue: Selected fiscal years 1976-1986—Continued

(In billions)

Source of revenue	1976	1978	1980	1982	1984	1986
	Private institutions					
Total	$17.7	$18.8	$19.1	$19.9	$21.3	$24.3
Tuition and fees*	9.2	9.9	10.0	10.8	11.7	13.0
Government appropriations	0.6	0.6	0.6	0.6	0.5	0.5
Federal	0.2	0.3	0.3	0.2	0.2	0.2
State and local	0.3	0.3	0.3	0.3	0.3	0.3
Government grants and contracts	3.8	3.8	4.1	3.7	3.6	4.8
Federal	3.3	3.4	3.6	3.3	3.1	4.2
State and local	0.5	0.4	0.5	0.4	0.5	0.6
Private gifts, grants, and contracts	2.6	2.7	2.6	2.6	3.0	3.3
Endowment income	1.2	1.2	1.4	1.6	1.7	1.9
Sales and services of educational activities	0.4	0.6	0.6	0.6	0.7	0.8

* Excludes Pell Grants.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics*, various years (based on the HEGIS survey Financial Statistics of Institution of Higher Education, various years).

Table 2:13–1 Index of expenditures in constant dollars per full-time-equivalent student at *public* institutions of higher education, by type of institution: Academic years ending 1977–1986

(1977 = 100)

Year	Educational and general expenditures [1]							
	Total	Instruction	Administration [2]	Research	Libraries	Public service	Operation and plant maintenance	Scholarships and fellowships
				Universities				
1977	100	100	100	100	100	100	100	100
1978	101	102	103	102	96	98	102	96
1979	103	103	104	106	94	103	105	90
1980	99	98	96	105	103	98	99	86
1981	96	95	96	103	89	99	96	85
1982	96	95	97	100	88	96	98	83
1983	97	97	98	102	91	97	101	85
1984	101	100	102	105	96	100	104	91
1985	107	105	112	114	98	106	109	96
1986	114	110	120	122	104	113	110	107
				Other 4-year institutions				
1977	100	100	100	100	100	100	100	100
1978	101	101	102	102	100	100	102	90
1979	102	101	106	110	99	102	103	85
1980	100	97	105	114	98	106	102	84
1981	98	95	103	112	98	106	102	79
1982	99	97	103	107	94	105	104	71
1983	98	97	102	106	92	105	104	74
1984	100	98	110	108	97	108	99	74
1985	108	104	118	120	101	123	109	74
1986	114	110	125	132	104	129	105	84

Table 2:13–1 Index of expenditures in constant dollars per full-time-equivalent student at *public* institutions of higher education, by type of institution: Academic years ending 1977–1986—Continued

(1977 = 100)

Year	Educational and general expenditures [1]							
	Total	Instruction	Administration [2]	Research	Libraries	Public service	Operation and plant maintenance	Scholarships and fellowships
	2-year institutions							
1977	100	100	100	([3])	100	([3])	100	100
1978	101	100	105	([3])	101	([3])	102	76
1979	102	100	108	([3])	98	([3])	103	78
1980	97	96	102	([3])	89	([3])	102	78
1981	93	92	97	([3])	83	([3])	99	71
1982	93	93	98	([3])	90	([3])	102	66
1983	90	90	97	([3])	77	([3])	98	65
1984	92	92	100	([3])	78	([3])	100	64
1985	103	101	113	([3])	85	([3])	111	76
1986	108	106	121	([3])	89	([3])	115	81

[1] Data are in constant dollars, adjusted by the Consumer Price Index for the academic year (July 1–June 30). Mandatory transfers are included in the total but are not shown separately.

[2] Administration expenditures include institutional support, student services, and academic support minus library costs.

[3] Not calculated; expenditure category constituted 2 percent or less of total expenditures in most years.

SOURCE: U.S. Department of Education, National Center for Education Statistics, "Recent Trends in Higher Education Finance, 1976–77 to 1985–86," *Higher Education Administrative Costs: Continuing the Study*, (based on the HEGIS survey Financial Statistics of Institutions of Higher Education, Institutional Characteristics of Colleges and Universities, and Fall Enrollment in Colleges and Universities), January 1988.

Table 2:13–2 Index of expenditures in constant dollars per full-time-equivalent student at *private*, nonprofit institutions of higher education, by type of institution: Academic years ending 1977–1986

(1977=100)

Year	Educational and general expenditures [1]							
	Total	Instruction	Administration [2]	Research	Libraries	Public service	Operation and plant maintenance	Scholarships and fellowships
				Universities				
1977	100	100	100	100	100	100	100	100
1978	99	99	100	98	100	93	99	102
1979	98	97	104	97	92	92	101	98
1980	97	96	102	94	86	100	98	94
1981	97	97	102	91	86	90	101	98
1982	97	100	103	88	87	88	105	98
1983	100	104	112	85	87	93	105	101
1984	109	110	124	92	99	96	112	118
1985	115	115	130	99	97	125	117	127
1986	122	121	139	107	102	130	120	137
				Other 4-year institutions				
1977	100	100	100	100	100	100	100	100
1978	100	100	101	95	100	90	101	98
1979	99	99	101	103	97	90	99	95
1980	98	96	100	103	92	88	100	96
1981	97	94	102	97	90	94	100	98
1982	99	96	105	91	90	104	101	101
1983	103	100	111	91	96	104	103	104
1984	108	104	116	95	99	108	106	115
1985	114	109	123	103	103	116	108	127
1986	120	113	130	115	107	128	110	139

Table 2:13–2 Index of expenditures in constant dollars per full-time-equivalent student at *private*, nonprofit institutions of higher education, by type of institution: Academic years ending 1977–1986—Continued

(1977=100)

Year	Educational and general expenditures [1]							
	Total	Instruction	Administration [2]	Research	Libraries	Public service	Operation and plant maintenance	Scholarships and fellowships
				2-year institutions				
1977	100	100	100	(3)	100	(3)	100	100
1978	95	94	98	(3)	96	(3)	93	93
1979	97	97	101	(3)	92	(3)	90	99
1980	93	92	98	(3)	87	(3)	86	102
1981	92	90	97	(3)	78	(3)	88	103
1982	90	89	98	(3)	75	(3)	83	91
1983	95	93	101	(3)	76	(3)	89	106
1984	96	91	104	(3)	77	(3)	93	115
1985	107	102	118	(3)	86	(3)	101	129
1986	110	106	122	(3)	87	(3)	102	133

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[1] Data are in constant dollars, adjusted by the Consumer Price Index for the academic year (July 1–June 30). Mandatory transfers are included in the total but are not shown separately.

[2] Administration expenditures include institutional support, student services, and academic support minus library costs.

[3] Not calculated; expenditure category constituted 2 percent or less of total expenditures.

SOURCE: U.S. Department of Education, National Center for Education Statistics, "Recent Trends in Higher Education Finance, 1976–77 to 1985–86," *Higher Education Administrative Costs: Continuing the Study*, (based on the HEGIS survey Financial Statistics of Institutions of Higher Education, Institutional Characteristics of Colleges and Universities, and Fall Enrollment in Colleges and Universities), January 1988.

Table 2:13–3 Index of average undergraduate tuition charges in *constant* dollars at institutions of higher education, by type and control of institution: Academic years ending 1977–1986

(1977 = 100)

Year	Public institutions			Private institutions		
	University	Other 4-year	2-year	University	Other 4-year	2-year
1977	100	100	100	100	100	100
1978	100	99	101	99	100	100
1979	97	94	99	98	101	99
1980	92	89	95	94	97	98
1981	90	87	92	95	98	103
1982	94	90	95	100	102	106
1983	101	99	100	109	110	113
1984	107	108	108	117	116	112
1985	112	110	115	124	121	121
1986	118	115	118	132	127	127

NOTE: Tuition charges (tuition and fees) are in constant dollars, adjusted by the Consumer Price Index for the academic year (July 1–June 30). They are for the entire academic year and are average charges paid by students. They were calculated on the basis of full-time-equivalent undergraduates. Tuition at public institutions is the charge to in-State students. The amount at private institutions includes charges at both nonprofit and proprietary schools.

SOURCE: U.S. Department of Education, National Center for Education Statistics, "Recent Trends in Higher Education Finance, 1976-77 to 1985-86," *Higher Education Administrative Costs: Continuing the Study*, (based on the HEGIS survey Financial Statistics of Institutions of Higher Education, Institutional Characteristics of Colleges and Universities, and Fall Enrollment in Colleges and Universities), January 1988.

Indicator 2:14

Table 2:14–1 Average faculty salaries in *constant* 1985–86 dollars in institutions of higher education, by academic rank and control and type of institution: Academic years ending 1972–1986

Year	All institutions			Public institutions			Private institutions		
	Professor	Associate professor	Assistant professor	Professor	Associate professor	Assistant professor	Professor	Associate professor	Assistant professor
				All institutions					
1972	$48,525	$36,746	$30,374	$49,018	$37,399	$30,904	$47,553	$35,280	$29,140
1973	48,759	37,041	30,577	49,427	37,874	31,227	47,450	35,190	29,084
1975	44,673	33,884	27,921	45,344	34,814	28,690	43,281	31,690	26,131
1976	44,354	33,400	27,397	45,021	34,328	28,145	43,020	31,230	25,732
1977	44,115	33,199	27,186	44,671	34,036	27,867	42,928	31,134	25,631
1978	43,669	32,990	26,983	44,294	33,853	27,724	42,289	30,790	25,260
1979	42,045	31,843	26,008	42,555	32,664	26,734	40,871	29,735	24,330
1980	39,791	30,068	24,481	40,349	30,895	25,211	38,499	28,006	22,852
1981	38,638	29,166	23,747	39,045	29,867	24,413	37,684	27,431	22,322
1982	38,778	29,280	23,850	38,948	29,875	24,480	38,371	27,782	22,519
1983	39,396	29,842	24 449	39,322	30,313	24,983	39,575	28,684	23,338
1985	40,896	30,813	25,383	40,667	31,236	25,885	41,448	29,803	24,352
1986	42,268	31,787	26,277	42,328	32,367	26,951	42,118	30,400	24,891
				4-year institutions					
1972	48,858	36,771	30,347	49,446	37,426	30,884	47,745	35,408	29,221
1973	49,117	37,016	30,469	49,913	37,865	31,121	47,659	35,295	29,150
1975	44,987	33,775	27,722	45,796	34,720	28,486	43,438	31,790	26,210
1976	44,684	33,385	27,338	45,472	34,375	28,137	43,216	31,331	25,811
1977	44,356	33,188	27,144	45,005	34,095	27,882	43,047	31,197	25,690
1978	43,886	32,960	26,863	44,596	33,899	27,651	42,418	30,858	25,315
1979	42,291	31,847	25,918	42,896	32,751	26,693	40,985	29,808	24,396
1980	40,072	30,093	24,405	40,743	31,022	25,190	38,625	28,072	22,916
1981	38,968	29,230	23,704	39,504	30,026	24,428	37,804	27,499	22,385
1982	39,112	29,341	23,819	39,403	30,032	24,513	38,466	27,830	22,576
1983	39,783	29,944	24,448	39,815	30,496	25,038	39,715	28,765	23,410
1985	41,416	30,964	25,449	41,341	31,482	26,020	41,581	29,891	24,446
1986	42,803	31,940	26,335	43,044	32,642	27,100	42,260	30,486	24,987

Table 2:14–1 Average faculty salaries in *constant* 1985–86 dollars in institutions of higher education, by academic rank and control and type of institution: Academic years ending 1972–1986—Continued

Year	All institutions			Public institutions			Private institutions		
	Professor	Associate professor	Assistant professor	Professor	Associate professor	Assistant professor	Professor	Associate professor	Assistant professor
				Universities					
1972	52,865	38,826	31,771	52,038	38,596	31,596	54,939	39,511	32,358
1973	52,961	38,906	31,833	52,223	38,721	31,675	54,669	39,425	32,325
1975	48,457	35,403	28,874	47,726	35,337	28,894	50,020	35,572	28,826
1976	48,331	35,205	28,634	47,624	35,271	28,774	49,764	35,036	28,311
1977	48,059	34,959	28,341	47,234	34,900	28,367	49,897	35,126	28,277
1978	47,378	34,555	27,915	46,551	34,444	27,868	49,251	34,868	28,029
1979	45,862	33,415	26,949	45,055	33,352	26,906	47,776	33,595	27,060
1980	43,279	31,436	25,303	42,457	31,357	25,274	45,243	31,652	25,378
1981	42,243	30,646	24,731	41,392	30,490	24,672	44,259	31,071	24,867
1982	42,424	30,777	25,010	41,294	30,494	24,872	45,174	31,580	25,336
1983	43,645	31,594	25,937	42,168	31,133	25,620	47,286	32,914	26,709
1985	45,398	32,624	27,129	43,508	31,965	26,656	50,016	34,441	28,271
1986	46,994	33,704	28,242	45,322	33,133	27,887	51,355	35,307	29,125
				Other 4-year institutions					
1972	$44,230	$35,004	$29,300	$45,784	$36,195	$30,219	$42,045	$33,120	$27,876
1973	44,862	35,431	29,517	46,888	37,002	30,640	41,944	32,940	27,773
1975	41,628	32,681	27,077	43,783	34,259	28,230	37,915	29,774	25,060
1976	41,188	32,209	26,627	43,289	33,733	27,752	37,572	29,400	24,680
1977	40,896	32,065	26,472	42,786	33,520	27,574	37,423	29,307	24,555
1978	40,772	31,975	26,280	42,753	33,523	27,515	36,988	28,959	24,146
1979	39,210	30,910	25,349	40,927	32,351	26,560	35,801	28,069	23,268
1980	37,322	29,267	23,895	39,182	30,791	25,135	33,649	26,387	21,858
1981	36,182	28,342	23,115	37,814	29,700	24,267	32,884	25,759	21,282
1982	36,405	28,475	23,156	37,778	29,718	24,280	33,583	26,128	21,428
1983	36,715	28,946	23,628	37,826	30,054	24,659	34,469	26,930	22,091
1985	38,288	29,940	24,519	39,530	31,139	25,605	35,796	27,831	22,903
1986	39,610	30,864	25,314	41,170	32,296	26,597	36,455	28,365	23,412

Indicator 2:14

Table 2:14–1 Average faculty salaries in *constant* 1985–86 dollars in institutions of higher education, by academic rank and control and type of institution: Academic years ending 1972–1986—Continued

Year	All institutions			Public institutions			Private institutions		
	Professor	Associate professor	Assistant professor	Professor	Associate professor	Assistant professor	Professor	Associate professor	Assistant professor
				2-year institutions					
1972	39,049	36,387	30,666	40,241	37,113	31,065	27,281	27,090	24,544
1973	42,363	37,353	31,559	43,416	37,948	31,914	27,183	28,149	25,244
1975	39,874	34,962	29,329	40,573	35,480	29,698	26,219	25,547	22,385
1976	38,784	33,544	27,853	39,732	34,006	28,188	24,327	24,749	21,761
1977	38,923	33,305	27,526	39,596	33,596	27,781	26,309	25,881	22,230
1978	39,651	33,264	27,838	40,348	33,549	28,073	24,570	25,060	21,620
1979	37,678	31,805	26 668	38,222	32,094	26,941	25,090	24,160	20,440
1980	35,184	29,845	25,044	35,724	30,099	25,315	23,204	22,682	19,042
1981	33,330	28,583	24.080	33,772	28,831	24,336	23,426	22,219	18,423
1982	33,751	28,733	24,087	34,056	28,895	24,317	24,747	23,253	18,813
1983	34,009	28,966	24,451	34,428	29,208	24,708	23,089	21,825	19,026
1985	34,470	29,532	24,878	34,785	29,776	25,182	24,264	21,997	18,975
1986	36,076	30,483	25,823	36,418	30,733	26,162	24,519	22,291	19,297

NOTE: Salaries are for full-time instructional faculty on 9- or 10-month contracts. They have been converted to constant dollars for the academic year 1985-86 (July 1–June 30) using the Consumer Price Index. Data for 1974 and 1984 are not available.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Salaries and Fringe Benefits, 1971-72 and 1972-73; *Salaries and Tenure of Instructional Faculty in Institutions of Higher Education*, 1974-75; *Salaries, Tenure, and Fringe Benefits of Full-Time Instructional Staff in Institutions of Higher Education 1975-76*; "College Faculty Salaries 1976-86," *OERI Bulletin*, 1987; and *Digest of Education Statistics, 1987.*

Table 2:14–2 Average faculty salaries in *current* dollars in institutions of higher education, by academic rank and control and type of institution: Academic years ending 1972–1986

Year	All institutions			Public institutions			Private institutions		
	Professor	Associate professor	Assistant professor	Professor	Associate professor	Assistant professor	Professor	Associate professor	Assistant professor
					All institutions				
1972	$18,349	$13,895	$11,486	$18,536	$14,142	$11,686	$17,982	$13,341	$11,019
1973	19,182	14,572	12,029	19,445	14,900	12,285	18,667	13,844	11,442
1975	21,264	16,128	13,290	21,583	16,571	13,656	20,601	15,084	12,438
1976	22,610	17,026	13,966	22,950	17,499	14,347	21,930	15,920	13,117
1977	23,792	17,905	14,662	24,092	18,356	15,029	23,152	16,791	13,823
1978	25,133	18,987	15,530	25,493	19,484	15,956	24,339	17,721	14,538
1979	26,470	20,047	16,374	26,791	20,564	16,831	25,731	18,720	15,317
1980	28,388	21,451	17,465	28,786	22,041	17,986	27,466	19,980	16,303
1981	30,753	23,214	18,901	31,077	23,772	19,431	29,994	21,833	17,767
1982	33,539	25,324	20,628	33,686	25,839	21,173	33,187	24,029	19,477
1983	35,540	26,921	22,056	35,473	27,346	22,538	35,701	25,876	21,054
1985	39,743	29,945	24,668	39,521	30,355	25,155	40,280	28,963	23,666
1986	42,268	31,787	26,277	42,328	32,367	26,951	42,118	30,400	24,891
					4-year institutions				
1972	18,475	13,905	11,475	18,698	14,152	11,678	18,054	13,389	11,050
1973	19,323	14,562	11,987	19,636	14,896	12,243	18,749	13,885	11,468
1975	21,413	16,076	13,195	21,798	16,526	13,559	20,676	15,131	12,476
1976	22,778	17,019	13,936	23,180	17,523	14,343	22,030	15,971	13,158
1977	23,922	17,899	14,639	24,272	18,388	15,037	23,216	16,825	13,855
1978	25,258	18,970	15,461	25,667	19,510	15,914	24,413	17,760	14,570
1979	26,625	20,050	16,317	27,006	20,619	16,805	25,803	18,766	15,359
1980	28,588	21,469	17,411	29,067	22,132	17,971	27,556	20,027	16,349
1981	31,016	23,265	18,867	31,442	23,898	19,442	30,089	21,887	17,816
1982	33,828	25,377	20,601	34,080	25,975	21,201	33,269	24,070	19,526
1983	35,889	27,013	22,055	35,918	27,511	22,588	35,828	25,949	21,118
1985	40,249	30,091	24,731	40,176	30,595	25,287	40,409	29,049	23,757
1986	42,803	31,940	26,335	43,044	32,642	27,100	42,260	30,486	24,987

Indicator 2:14

Table 2:14–2 Average faculty salaries in *current* dollars in institutions of higher education, by academic rank and control and type of institution: Academic years ending 1972–1986—Continued

Year	All institutions			Public institutions			Private institutions		
	Professor	Associate professor	Assistant professor	Professor	Associate professor	Assistant professor	Professor	Associate professor	Assistant professor
Universities									
1972	$19,991	$14,682	$12,014	$19,678	$14,595	$11,948	$20,775	$14,941	$12,236
1973	20,835	15,306	12,523	20,545	15,233	12,461	21,507	15,510	12,717
1975	23,065	16,851	13,744	22,717	16,820	13,753	23,809	16,932	13,721
1976	24,637	17,946	14,597	24,277	17,980	14,668	25,368	17,860	14,432
1977	25,919	18,854	15,285	25,474	18,822	15,299	26,910	18,944	15,250
1978	27,268	19,888	16,066	26,792	19,824	16,039	28,346	20,068	16,132
1979	28,873	21,037	16,966	28,365	20,997	16,939	30,078	21,150	17,036
1980	30,876	22,427	18,052	30,290	22,371	18,031	32,277	22,581	18,105
1981	33,622	24,392	19,684	32,945	24,268	19,637	35,227	24,730	19,792
1982	36,693	26,619	21,631	35,715	26,374	21,512	39,071	27,314	21,913
1983	39,373	28,502	23,398	38,041	28,086	23,112	42,658	29,692	24,095
1985	44,119	31,704	26,365	42,282	31,064	25,905	48,606	33,470	27,474
1986	46,994	33,704	28,242	45,322	33,133	27,887	51,355	35,307	29,125
Other 4-year institutions									
1972	16,725	13,236	11,080	17,313	13,687	11,427	15,899	12,524	10,541
1973	17,649	13,939	11,612	18,446	14,557	12,054	16,501	12,959	10,926
1975	19,814	15,556	12,888	20,840	16,307	13,437	18,047	14,172	11,928
1976	20,996	16,419	13,573	22,067	17,196	14,147	19,153	14,987	12,581
1977	22,056	17,293	14,277	23,075	18,078	14,871	20,183	15,806	13,243
1978	23,466	18,403	15,125	24,606	19,294	15,836	21,288	16,667	13,897
1979	24,685	19,460	15,959	25,766	20,367	16,721	22,539	17,671	14,649
1980	26,626	20,880	17,047	27,953	21,967	17,932	24,006	18,825	15,594
1981	28,798	22,558	18,398	30,097	23,639	19,315	26,173	20,502	16,939
1982	31,487	24,628	20,028	32,674	25,703	21,000	29,046	22,598	18,533
1983	33,121	26,113	21,315	34,124	27,112	22,245	31,095	24,294	19,929
1985	37,209	29,096	23,828	38,416	30,262	24,883	34,787	27,047	22,258
1986	39,610	30,864	25,314	41,170	32,296	26,597	36,455	28,365	23,412

Table 2:14–2 Average faculty salaries in *current* dollars in institutions of higher education, by academic rank and control and type of institution: Academic years ending 1972–1986—Continued

Year	All institutions			Public institutions			Private institutions		
	Professor	Associate professor	Assistant professor	Professor	Associate professor	Assistant professor	Professor	Associate professor	Assistant professor
				2-year institutions					
1972	$14,766	$13,760	$11,596	$15,217	$14,034	$11,747	$10,316	$10,244	$9,281
1973	16,666	14,695	12,415	17,080	14,929	12,555	10,694	11,074	9,931
1975	18,980	16,641	13,960	19,312	16,888	14,136	12,480	12,160	10,655
1976	19,770	17,100	14,199	20,254	17,335	14,369	12,401	12,616	11,093
1977	20,992	17,962	14,845	21,355	18,119	14,983	14,189	13,958	11,989
1978	22,821	19,145	16,022	23,222	19,309	16,157	14,141	14,423	12,443
1979	23,721	20,023	16,789	24,063	20,205	16,961	15,796	15,210	12,868
1980	25,101	21,292	17,867	25,486	21,473	18,060	16,554	16,182	13,585
1981	26,528	22,750	19,166	26,880	22,947	19,370	18,645	17,685	14,663
1982	29,191	24,851	20,833	29,455	24,991	21,032	21,404	20,112	16,271
1983	30,680	26,131	22,058	31,058	26,349	22,290	20,829	19,689	17,164
1985	33,498	28,700	24,176	33,805	28,937	24,473	23,580	21,377	18,440
1986	36,076	30,483	25,823	36,418	30,733	26,162	24,519	22,291	19,297

NOTE: Salaries are for full-time instructional faculty on 9- or 10-month contracts.

SOURCE: U.S. Department of Education, National Center for Education Statistics, Salaries and Fringe Benefits, 1971–72 and 1972–73; *Salaries and Tenure of Instructional Faculty in Institutions of Higher Education*, 1974–75; *Salaries, Tenure and Fringe Benefits of Full-Time Instructional Staff in Institutions of Higher Education, 1975–76*; "College Faculty Salaries 1976–86," *OERI Bulletin*, 1987; and *Digest of Education Statistics, 1987.*

Table 2:14–3 **Index of average salaries in *current* dollars of full-time instructional faculty in institutions of higher education, by academic rank and selected other professional occupations in medium-sized and large private firms: Academic years ending 1972–1986**

(Base year = academic year 1971–72)

Occupation	1972	1973	1974	1975	1976
Full professor	100	105	—	116	123
Associate professor	100	105	—	116	123
Assistant professor	100	105	—	116	122
Accountant	100	105	111	122	130
Chief accountant	100	106	113	123	131
Auditor	100	105	111	118	125
Attorney	100	106	112	121	128
Chemist	100	104	111	122	130
Engineer	100	105	111	120	128

Occupation	1977	1978	1979	1980	1981
Full professor	130	137	144	155	168
Associate professor	129	137	144	154	167
Assistant professor	128	135	143	152	165
Accountant	140	152	164	179	197
Chief accountant	145	157	169	188	206
Auditor	133	144	153	167	184
Attorney	135	148	161	176	193
Chemist	139	152	164	180	196
Engineer	136	149	161	177	196

Table 2:14–3 Index of average salaries in *current* dollars of full-time instructional faculty in institutions of higher education, by academic rank and selected other professional occupations in medium-sized and large private firms: Academic years ending 1972–1986—Continued

(Base year=academic year 1971–72)

Occupation	1982	1983	1984	1985	1986
Full professor	183	194	—	217	230
Associate professor	182	194	—	216	229
Assistant professor	180	192	—	215	229
Accountant	216	231	242	253	264
Chief accountant	229	239	252	268	282
Auditor	201	214	231	240	244
Attorney	215	231	242	257	274
Chemist	217	230	242	255	268
Engineer	216	232	244	256	267

—Faculty salaries are not available for 1974 and 1984.

NOTE: Faculty salaries are for the period of the 9- or 10-month contract and the salaries for other occupations are for March of the year.

SOURCE: U.S. Department of Education, National Center for Education Statistics, the HEGIS survey Salaries, Tenure, and Fringe Benefits of Full-Time Instructional Faculty, various years. U.S. Department of Labor, Bureau of Labor Statistics, National Survey of Professional, Administrative, Technical, and Clerical Pay, March 1982 and March 1986.

Indicator 2:15

Table 2:15–1 Percent of new doctorates with definite employment plans in the United States who have commitments at colleges and universities, by field of study: Selected years of doctorate 1971–1987

Field of study [1]	1971	1973	1975	1977	1979	1981	1983	1985	1987
All fields [2]	69.3	65.0	60.4	58.8	55.1	51.4	51.8	50.6	52.0
Humanities and social/behavioral sciences	85.3	80.7	75.5	71.6	65.7	61.8	62.6	61.2	61.4
Humanities	94.6	93.4	89.4	87.4	82.5	82.3	84.6	81.9	84.8
Social and behavioral sciences	79.7	73.1	68.7	63.9	58.2	52.8	52.6	51.3	49.6
Natural and computer sciences and engineering	51.5	46.3	40.8	42.1	39.1	36.3	39.7	38.7	39.1
Natural sciences	61.3	56.9	48.9	50.0	44.5	39.3	41.3	42.0	40.3
Life sciences	69.9	64.5	59.5	61.5	60.1	54.8	51.3	51.9	48.4
Physical sciences	41.9	38.0	25.8	29.8	22.2	16.8	23.1	23.4	24.4
Mathematics	85.7	77.6	74.3	72.6	70.8	70.3	77.2	76.4	75.4
Computer sciences and engineering	31.3	25.3	24.9	27.0	29.1	30.6	36.7	33.2	37.6
Computer and information sciences	—	—	—	50.0	53.2	52.7	53.6	54.2	68.5
Engineering	31.3	25.3	24.9	26.7	26.6	28.0	34.4	30.6	32.1
Technical/professional	69.6	63.9	60.6	58.7	57.5	53.3	51.6	51.1	53.6
Education	67.6	60.2	56.4	54.5	52.6	48.2	45.0	42.8	45.0
Other technical/professional	78.4	77.3	75.1	72.8	72.2	69.3	69.9	72.2	73.0

—Data not collected as a separate field of study.

[1] Field classification differs slightly from that used in other indicators in this volume. One such difference is the inclusion of agriculture and agricultural sciences with the life sciences rather than with technical/professional fields.

[2] Includes those for whom field of study is unknown.

NOTE: Only doctorates with definite employment commitments in the United States are reported here. A "definite commitment" is defined as a signed contract, acceptance of a formal offer, etc.

SOURCE: National Research Council, Doctorate Records File (based on the Survey of Earned Doctorates, various years), special tabulations.

Table 2:15-2 Number of new doctorates with definite employment plans in the United States who have commitments at colleges and universities, by field of study: Selected years of doctorate 1971–1987

Field of study [1]	1971	1973	1975	1977	1979
All fields [2]	12,306	11,626	10,134	8,896	8,133
Humanities and social/behavioral sciences	5,468	5,349	4,524	3,756	3,237
Humanities	2,259	2,306	1,753	1,491	1,257
Social and behavioral sciences	3,209	3,043	2,771	2,265	1,980
Natural and computer sciences and engineering	3,018	2,392	1,894	1,680	1,636
Natural sciences	2,422	1,951	1,505	1,314	1,210
Life sciences	1,097	963	752	640	649
Physical sciences	686	495	317	334	273
Mathematics	639	493	436	340	288
Computer sciences and engineering	596	441	389	366	426
Computer and information sciences	—	—	—	8	74
Engineering	596	441	389	358	352
Technical/professional	3,802	3,875	3,710	3,454	3,251
Education	2,998	2,860	2,685	2,462	2,237
Other technical/professional	804	1,015	1,025	992	1,014

Field of study [1]	1981	1983	1985	1987
All fields [2]	7,725	7,188	6,786	6,706
Humanities and social/behavioral sciences	3,084	2,808	2,565	2,523
Humanities	1,256	1,183	1,107	1,170
Social and behavioral sciences	1,828	1,625	1,458	1,353
Natural and computer sciences and engineering	1,537	1,548	1,530	1,426
Natural sciences	1,097	1,035	1,038	834
Life sciences	604	510	522	396
Physical sciences	218	274	267	242
Mathematics	275	251	249	196
Computer sciences and engineering	440	513	492	592
Computer and information sciences	79	90	90	161
Engineering	361	423	402	431
Technical/professional	3,090	2,827	2,682	2,738
Education	2,115	1,813	1,608	1,591
Other technical/professional	975	1,014	1,074	1,147

—Data not collected as a separate field of study.

[1] Field classification differs slightly from that used in other indicators in this volume. One such difference is the inclusion of agriculture and agricultural sciences with the life sciences rather than with technical/professional fields.

[2] Includes those for whom field of study is unknown.

NOTE: Only doctorates with definite employment commitments in the United States are reported here. A "definite commitment" is defined as a signed contract, acceptance of a formal offer, etc.

SOURCE: National Research Council, Doctorate Records File (based on the Survey of Earned Doctorates, various years), special tabulations.

Indicator 2:15

Table 2:15–3 Number of new doctorates, by postgraduate plans: Selected years of doctorate 1971–1987

Year of doctorate	Total number of doctorates [1]	Doctorates with definite postgraduation commitments				
		Total with plans [2]	In the United States [3]		Outside United States	Location unknown
			Study	Employment		
1971	31,867	23,867	3,119	17,759	2,176	687
1973	33,755	24,091	3,335	17,881	2,182	573
1975	32,951	22,924	3,344	16,767	2,077	558
1977	31,716	21,345	3,438	15,128	1,913	716
1979	31,237	21,411	3,711	14,770	1,927	865
1981	31,353	21,888	3,700	15,036	1,981	1,122
1983	31,216	21,163	3,797	13,873	2,086	1,380
1985	31,211	20,896	3,990	13,393	2,087	1,376
1987	32,278	21,240	4,606	12,891	2,075	1,592

[1] Due to differences in survey design, the total number of doctorates reported by the Survey of Earned Doctorates differs from that obtained from the Department of Education's HEGIS survey of Degrees and Other Formal Awards Conferred.

[2] Includes those with unknown type of plans in the U.S.

[3] Those with unknown type of plans are not shown.

NOTE: A "definite commitment" is defined as a signed contract, acceptance of a formal offer, etc.

SOURCE: National Science Foundation, *Science and Engineering Doctorates: 1960–86; Early Release of Summary Statistics on Science and Engineering Doctorates 1987*; and unpublished tabulations.

Table 2:15–4 **Percent of new doctorates with definite employment plans in the United States with commitments in employment sectors other than higher education, by selected field of study: Selected years of doctorate 1971–1987**

Field of study [1] and employment sector [2]	1971	1973	1975	1977	1979
All fields					
Elementary/secondary school	5.5	7.6	8.3	8.9	8.4
Nonprofit organization	3.3	4.5	5.3	6.0	6.6
Industry	11.4	10.8	12.4	12.0	15.5
Government	9.8	11.0	12.4	12.9	12.7
Social and behavioral sciences					
Elementary/secondary school	1.8	2.5	2.5	2.9	2.4
Nonprofit organization	4.6	7.1	8.1	10.3	12.0
Industry	2.2	3.3	3.8	4.5	7.4
Government	10.4	12.1	14.8	16.0	17.0
Natural sciences					
Elementary/secondary school	0.4	0.8	0.7	0.6	0.4
Nonprofit organization	2.4	3.0	3.2	2.2	3.1
Industry	22.6	21.8	30.0	29.8	36.8
Government	12.7	16.5	16.5	16.5	14.3
Education					
Elementary/secondary school	19.2	24.4	25.1	25.6	25.1
Nonprofit organization	3.5	4.2	4.9	5.4	5.8
Industry	0.9	1.0	1.6	1.5	2.6
Government	7.9	9.3	11.1	11.7	12.2

Table 2:15–4 Percent of new doctorates with definite employment plans in the United States with commitments in employment sectors other than higher education, by selected field of study: Selected years of doctorate 1971–1987—Continued

Field of study [1] and employment sector [2]	1981	1983	1985	1987
All fields				
Elementary/secondary school	9.8	10.3	10.0	10.2
Nonprofit organization	6.7	7.2	7.6	7.6
Industry	17.4	17.3	18.0	17.1
Government	12.5	10.8	11.3	10.4
Social and behavioral sciences				
Elementary/secondary school	3.4	3.5	3.6	3.5
Nonprofit organization	12.7	14.1	15.3	15.6
Industry	8.5	9.3	9.7	11.0
Government	18.4	15.1	15.1	14.0
Natural sciences				
Elementary/secondary school	0.5	0.5	0.3	0.2
Nonprofit organization	2.1	2.6	2.4	3.4
Industry	43.5	41.3	41.7	41.0
Government	13.5	13.3	12.7	14.1
Education				
Elementary/secondary school	28.9	31.0	31.1	32.7
Nonprofit organization	5.7	6.6	6.6	6.9
Industry	3.0	4.1	4.2	3.1
Government	12.2	10.4	12.8	9.9

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[1] Field of study classification differs slightly from that used in other indicators in this volume. One such difference is the inclusion of agriculture and the agricultural sciences with life sciences rather than with other technical/professional.

[2] Self-employment and other or unknown employment sector are not shown.

NOTE: Only doctorates with definite employment commitments in the United States are reported here. A "definite commitment" is defined as a signed contract, acceptance of a formal offer, etc..

SOURCE: National Research Council, Doctorate Records File (based on the Survey of Earned Doctorates, various years), special tabulations.

Indicator 2:16

Table 2:16–1 Enrollments in institutions of higher education, by type and control of institution: Selected years 1970–1988

Fall of year	All institutions	Total		Public		Private	
		Public	Private	4-year	2-year	4-year	2-year
				(In thousands)			
1970	8,581	6,428	2,153	4,326	2,102	2,032	121
1972	9,215	7,071	2,144	4,430	2,641	2,029	115
1974	10,224	7,989	2,235	4,704	3,285	2,117	119
1976	11,012	8,653	2,359	4,901	3,752	2,227	132
1978	11,260	8,786	2,475	4,912	3,874	2,320	155
1980	12,097	9,457	2,640	5,128	4,329	2,442	197
1982	12,426	9,696	2,730	5,176	4,520	2,478	252
1983	12,465	9,683	2,782	5,223	4,459	2,518	264
1984	12,242	9,477	2,765	5,198	4,279	2,513	251
1985	12,247	9,479	2,768	5,210	4,270	2,506	262
1986	12,505	9,717	2,790	5,301	4,414	2,524	266
1987 [1]	12,768	9,975	2,793	5,434	4,541	2,558	235
1988 [2]	12,849	10,045	2,804	5,478	4,567	2,550	—

—Not available.

[1] Preliminary data

[2] Estimates based on a sample survey.

NOTE: Detail may not add to totals due to rounding. Some data revised from previously published figures.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics*, forthcoming; "National Estimates of Higher Education Statistics," *Early National Estimates*, 1988.

Indicator 2:17

Table 2:17–1 Trends in total enrollment of part-time students, women, students 25 years old or older, and graduate and professional students in institutions of higher education: Selected years 1970–1988

Fall	Total	Part-time	Women	25 years or older [1]	Graduate and professional
	(In thousands)	Percentage of total enrollment			
1970	8,581	32.2	41.2	—	14.1
1972	9,215	34.1	43.1	28.0	13.8
1974	10,224	37.7	45.0	32.8	13.9
1976	11,012	39.0	47.2	33.0	14.4
1978	11,260	40.8	49.9	34.8	14.0
1980	12,097	41.3	51.4	34.3	13.4
1982	12,426	41.9	51.5	35.6	12.9
1984	12,242	42.0	52.1	36.2	13.3
1986 [2]	12,505	43.1	52.9	38.6	13.6
1987 [3]	12,544	42.5	53.1	—	13.1
1988 [4]	12,849	42.6	53.7	—	13.3

—Not available.

[1] Data on the percentage of students aged 25 or older come from the Bureau of the Census. Years 1972 to 1980 are controlled to the 1970 census base. Years 1981 to 1987 are controlled to the 1980 census base.

[2] 1986 data for "25 years or older" and "Graduate and professional" only contain preliminary data.

[3] Preliminary data.

[4] Estimated

NOTE: Some data revised from previously published figures.

SOURCE: U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics, 1988* (based on a NCES survey Fall Enrollments in Colleges and Universities, various years); "National Estimates of Higher Education Statistics: 1988", *Early Estimates*, 1988. U.S. Department of Commerce, Bureau of the Census, "School Enrollments—Social and Economic Characteristics of Students," October, various years, *Current Population Reports*, Series P-20; and unpublished tabulations.

Table 2:18–1 Population and college enrollment, by selected age groups: 1980–1986

(Numbers in thousands)

Year	Total college enrollment *	Population 18 to 24			Population 25 and older		
		Total	Enrolled in college		Total	Enrolled in college	
			Number	Percent		Number	Percent
1980	11,387	29,252	7,226	24.7	132,730	3,910	2.9
1981	12,127	29,307	7,575	25.8	135,417	4,321	3.2
1982	12,308	29,162	7,678	26.3	138,223	4,377	3.2
1983	12,320	28,847	7,477	25.9	140,970	4,583	3.3
1984	12,304	28,323	7,591	26.8	143,671	4,460	3.1
1985	12,524	27,707	7,537	27.2	146,341	4,724	3.2
1986	12,401	26,976	7,397	27.4	149,115	4,788	3.2

* Includes a few students between the ages of 14 and 17.

SOURCE: U.S. Department of Commerce, Bureau of the Census, "Estimates of the Population of the United States, by Age, Sex, Race: 1980 to 1986," *Current Population Reports*, Series P-25, No. 1000; "School Enrollments—Social and Economic Characteristics of Students: October 1983," *Current Population Reports*, Series P-20, No. 413; and unpublished tabulations.

Indicator 2:19

Table 2:19–1 Participation rates of 18-to 24-year-olds in higher education, by race and ethnicity: 1970–1986

Fall	White	Black	Hispanic *
		(Percent enrolled)	
1970	27.1	15.5	—
1971	27.2	18.2	—
1972	26.4	18.1	13.4
1973	25.0	16.0	16.0
1974	25.2	17.9	18.1
1975	26.9	20.7	20.4
1976	27.1	22.6	19.9
1977	26.5	21.3	17.2
1978	25.7	20.1	15.2
1979	25.6	19.8	16.6
1980	26.2	19.2	16.1
1981	26.7	19.9	16.7
1982	27.2	19.8	16.8
1983	27.0	19.2	17.2
1984	28.0	20.4	17.9
1985	28.7	19.7	16.9
1986	28.3	21.8	17.6

—Not available.

* Hispanics may be of any race.

SOURCE: U.S. Department of Commerce, Bureau of the Census, "School Enrollments—Social and Economic Characteristics of Students, October [various years]," *Current Population Reports*, Series P-20.

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